

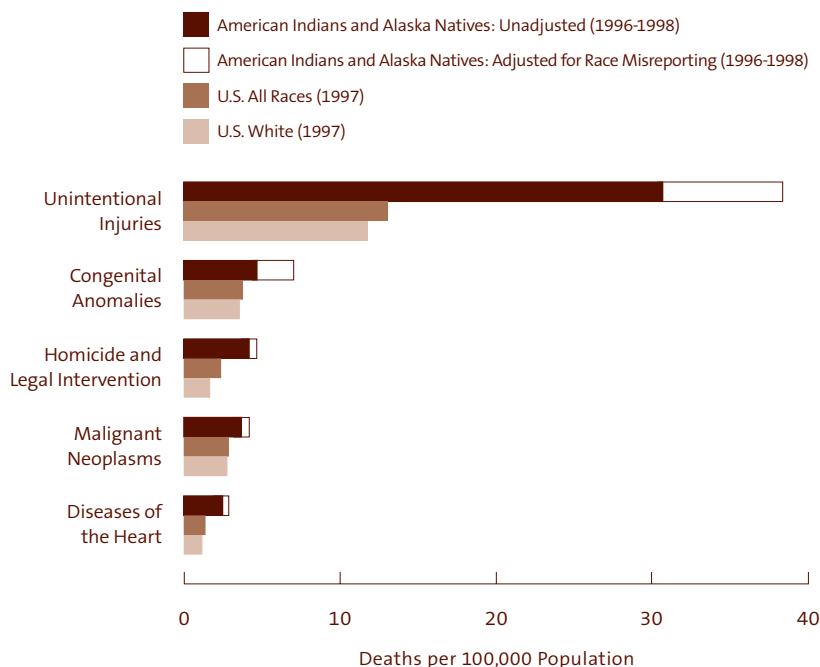
# PART 4

## General Mortality Statistics

**Chart 4.1**

**Death Rates, Leading Causes: Ages 1 to 4 Years**

The two leading causes of AI/AN deaths (1996-1998) for ages 1 to 4 were unintentional injuries and congenital anomalies. For the U.S. all-races and white populations (1997) the two leading causes of death were also unintentional injuries and congenital anomalies.



**Table 4.1**

**Ten Leading Causes of Death for Decedents 1 to 4 Years of Age**

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>251</b>	<b>315</b>	<b>62.2</b>	<b>78.1</b>	<b>35.8</b>	<b>31.6</b>	<b>2.2</b>	<b>2.5</b>
Unintentional injuries	124	156	30.7	38.7	13.1	11.8	3.0	3.3
Motor vehicle	68	80	16.9	19.8	5.0	4.5	4.0	4.4
Other unintentional injuries	56	76	13.9	18.8	8.1	7.3	2.3	2.6
Congenital anomalies	19	29	4.7	7.2	3.8	3.6	1.9	2.0
Homicide and legal intervention	17	19	4.2	4.7	2.4	1.7	2.0	2.8
Malignant neoplasms	15	17	3.7	4.2	2.9	2.8	1.4	1.5
Diseases of the heart	10	12	2.5	3.0	1.4	1.2	2.1	2.5
Pneumonia and influenza	7	8	1.7	2.0	1.2	1.0	1.7	2.0
Meningitis	3	3	0.7	0.7	0.3	0.2	2.3	3.5
Acute bronchitis and bronchiolitis	2	2	0.5	0.5	0.1	0.1	5.0	5.0
Chronic obstructive pulmonary diseases and allied conditions	2	2	0.5	0.5	0.3	0.1	1.7	5.0
Abdominal hernia	1	2	0.2	0.5	0.1	0.1	5.0	5.0
All other causes	51	65						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.  
NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.2

## Death Rates, Leading Causes: Ages 5 to 14 Years

The two leading causes of AI/AN deaths (1996-1998) for ages 5 to 14 years were unintentional injuries and homicide and legal intervention. For the U.S. all-races and white populations (1997) the two leading causes of death were unintentional injuries and malignant neoplasms.

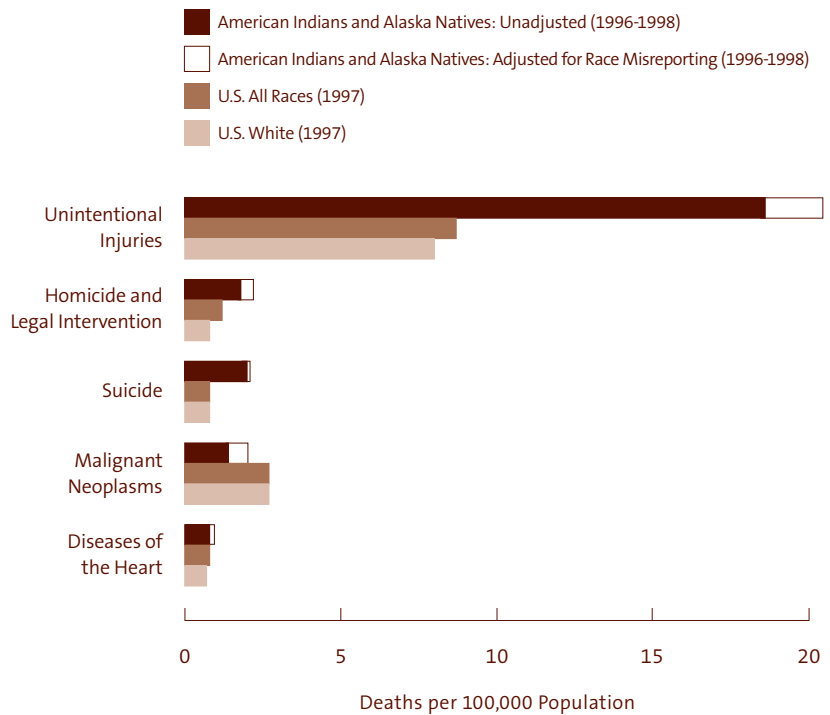


Table 4.2

## Ten Leading Causes of Death for Decedents 5 to 14 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>291</b>	<b>326</b>	<b>31.5</b>	<b>35.3</b>	<b>20.8</b>	<b>18.9</b>	<b>1.7</b>	<b>1.9</b>
Unintentional injuries	172	189	18.6	20.5	8.7	8.0	2.4	2.6
Motor vehicle	94	104	10.2	11.3	5.1	4.9	2.2	2.3
Other unintentional injuries	78	85	8.5	9.2	3.6	3.1	2.6	3.0
Homicide and legal intervention	17	21	1.8	2.3	1.2	0.8	1.9	2.9
Suicide	18	19	2.0	2.1	0.8	0.8	2.6	2.6
Malignant neoplasms	13	18	1.4	2.0	2.7	2.7	0.7	0.7
Diseases of the heart	7	8	0.8	0.9	0.8	0.7	1.1	1.3
Pneumonia and influenza	4	7	0.4	0.8	0.4	0.3	2.0	2.7
Chronic obstructive pulmonary diseases and allied conditions	6	7	0.6	0.8	0.3	0.2	2.7	4.0
Congenital anomalies	5	5	0.5	0.5	1.2	1.1	0.4	0.5
Benign neoplasms	3	3	0.3	0.3	0.2	0.2	1.5	1.5
Meningococcal infection	1	1	0.1	0.1	0.1	0.1	1.0	1.0
All other causes	45	48						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.  
NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.3

## Death Rates, Leading Causes: Ages 15 to 24 Years

The two leading causes of AI/AN deaths (1996-1998) and the U.S. white populations (1997) for ages 15 to 24 years were unintentional injuries and suicide. For the U.S. all-races (1997) the two leading causes of death were unintentional injuries and homicide and legal intervention.

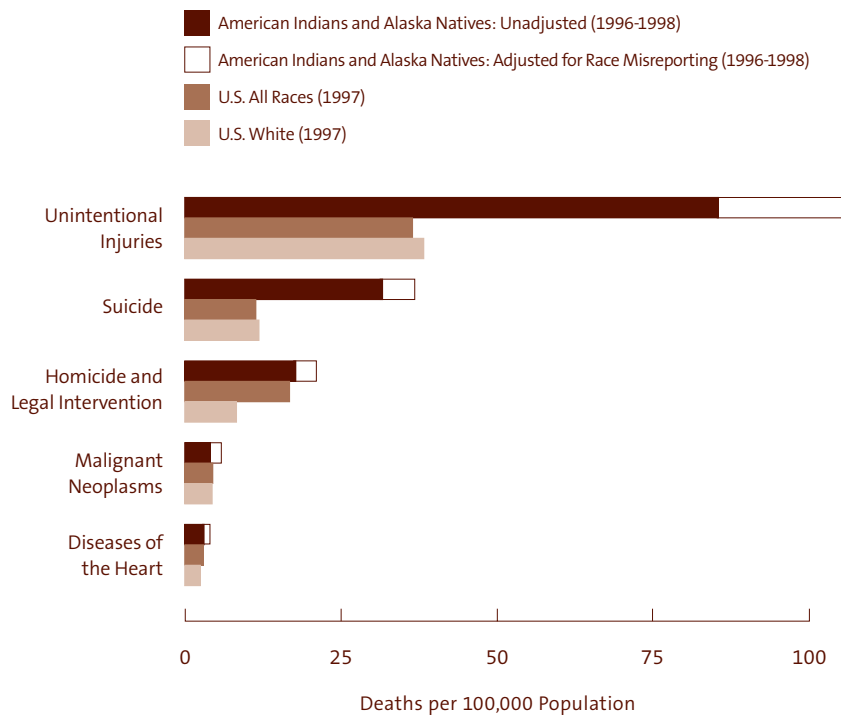


Table 4.3

## Ten Leading Causes of Death for Decedents 15 to 24 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>1,206</b>	<b>1,474</b>	<b>158.2</b>	<b>193.4</b>	<b>86.2</b>	<b>77.5</b>	<b>2.2</b>	<b>2.5</b>
Unintentional injuries	652	810	85.5	106.3	36.5	38.3	2.9	2.8
Motor vehicle	497	632	65.2	82.9	27.9	29.5	3.0	2.8
Other unintentional injuries	155	178	20.3	23.4	8.6	8.8	2.7	2.7
Suicide	242	285	31.7	37.4	11.4	11.9	3.3	3.1
Homicide and legal intervention	136	162	17.8	21.3	16.8	8.3	1.3	2.6
Malignant neoplasms	31	39	4.1	5.1	4.5	4.4	1.1	1.2
Diseases of the heart	24	31	3.1	4.1	3.0	2.5	1.4	1.6
Congenital anomalies	10	14	1.3	1.8	1.1	1.1	1.6	1.6
Pneumonia and influenza	9	11	1.2	1.4	0.6	0.5	2.3	2.8
Chronic obstructive pulmonary diseases and allied conditions	5	6	0.7	0.8	0.5	0.4	1.6	2.0
Cerebrovascular diseases	5	5	0.7	0.7	0.5	0.5	1.4	1.4
Chronic liver disease and cirrhosis	3	5	0.4	0.7	0.1	0.0	7.0	*
All other causes	89	106						

\* Figure does not meet standards of reliability or precision.

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.4

## Death Rates, Leading Causes: Ages 25 to 44 Years

The two leading causes of AI/AN deaths (1996-1998) for ages 25 to 44 years were unintentional injuries and chronic liver disease and cirrhosis. For the U.S. all-races and U.S. white populations (1997) the two leading causes of death were unintentional injuries and malignant neoplasms.

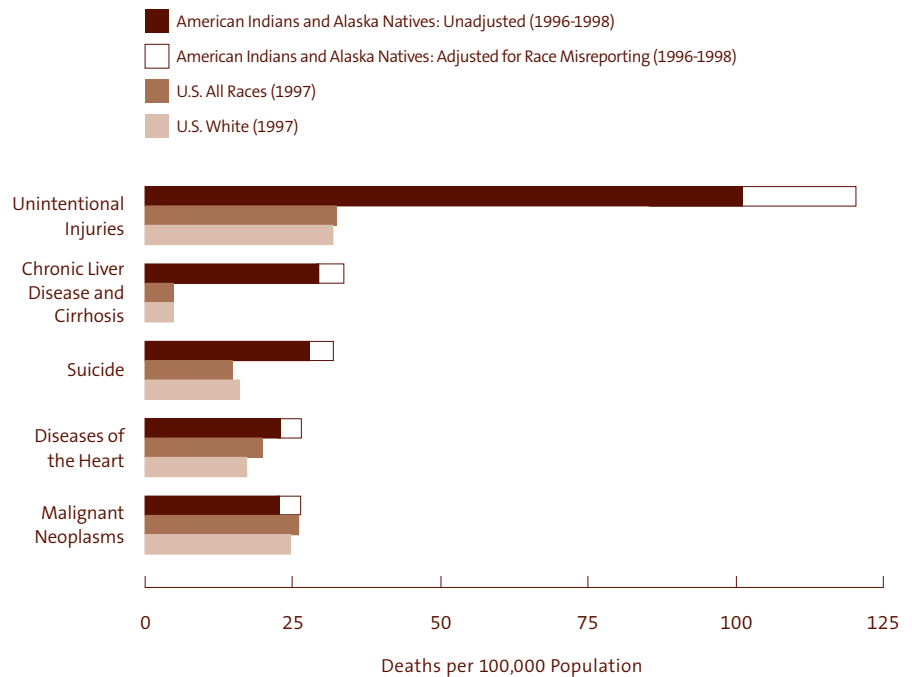


Table 4.4

## Ten Leading Causes of Death for Decedents 25 to 44 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>3,906</b>	<b>4,556</b>	<b>307.0</b>	<b>358.1</b>	<b>161.4</b>	<b>142.0</b>	<b>2.2</b>	<b>2.5</b>
Unintentional injuries	1,286	1,515	101.1	119.1	32.4	31.8	3.7	3.7
Motor vehicle	772	920	60.7	72.3	16.9	16.6	4.3	4.4
Other unintentional injuries	514	595	40.4	46.8	15.5	15.2	3.0	3.1
Chronic liver disease and cirrhosis	374	436	29.4	34.3	4.8	4.8	7.1	7.1
Suicide	354	408	27.8	32.1	14.8	16.0	2.2	2.0
Diseases of the heart	291	340	22.9	26.7	19.8	17.2	1.3	1.6
Malignant neoplasms	289	332	22.7	26.1	26.0	24.6	1.0	1.1
Homicide and legal intervention	245	284	19.3	22.3	10.5	6.3	2.1	3.5
Human immunodeficiency virus (HIV) infection	92	110	7.2	8.6	13.2	7.8	0.7	1.1
Diabetes mellitus	87	97	6.8	7.6	3.0	2.5	2.5	3.0
Pneumonia and influenza	83	95	6.5	7.5	2.3	1.9	3.3	3.9
Cerebrovascular diseases	64	74	5.0	5.8	4.1	3.2	1.4	1.8
All other causes	741	865						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.5

## Death Rates, Leading Causes: Ages 45 to 54 Years

The two leading causes of AI/AN deaths (1996-1998) for ages 45 to 54 years were diseases of the heart and malignant neoplasms. For the U.S. all-races and U.S. white populations (1997) the ranking of these two leading causes of death was in reverse order.

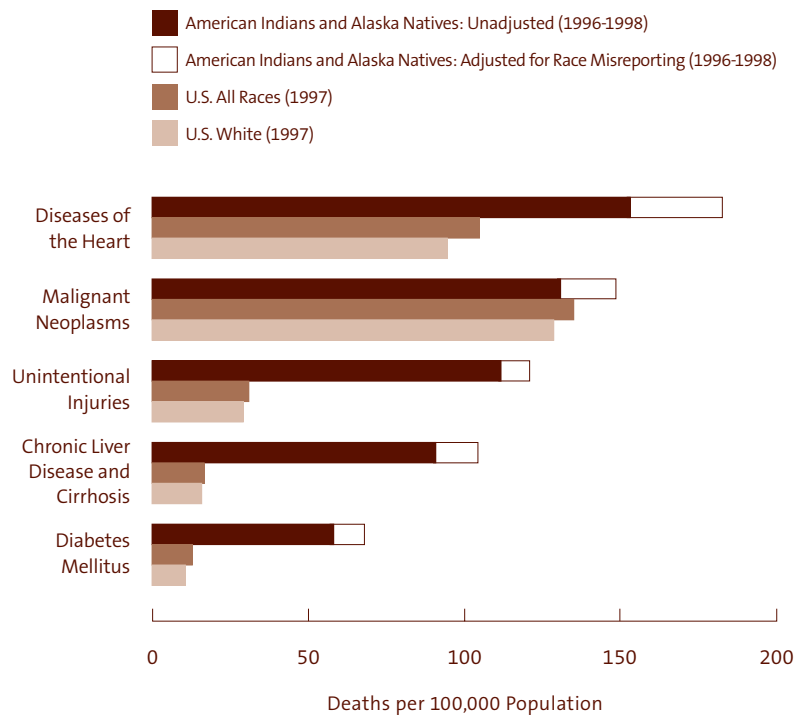


Table 4.5

## Ten Leading Causes of Death for Decedents 45 to 54 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Adjusted <sup>1</sup>	Rate Unadjusted	Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>2,704</b>	<b>3,087</b>	<b>795.3</b>	<b>908.9</b>	<b>430.8</b>	<b>389.3</b>	<b>2.1</b>	<b>2.3</b>
Diseases of the heart	521	618	153.2	181.8	104.9	94.6	1.7	1.9
Malignant neoplasms	445	509	130.9	149.7	135.1	128.7	1.1	1.2
Unintentional injuries	380	421	111.8	123.8	31.0	29.2	4.0	4.2
Motor vehicle	195	215	57.4	63.3	14.3	13.8	4.4	4.6
Other unintentional injuries	185	206	54.4	60.6	16.7	15.4	3.6	3.9
Chronic liver disease and cirrhosis	309	360	90.9	105.9	16.7	15.9	6.3	6.7
Diabetes mellitus	198	236	58.2	69.4	12.9	10.7	5.4	6.5
Cerebrovascular diseases	82	89	24.1	26.2	16.9	13.1	1.6	2.0
Pneumonia and influenza	70	74	20.6	21.8	6.6	5.6	3.3	3.9
Homicide and legal intervention	53	56	15.6	16.5	5.6	4.0	2.9	4.1
Suicide	47	52	13.8	15.3	14.7	16.1	1.0	1.0
Nephritis, nephrotic syndrome, and nephrosis	35	38	10.3	11.2	2.6	1.9	4.3	5.9
All other causes	564	634						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.  
NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.6

## Death Rates, Leading Causes: Ages 55 to 64 Years

The two leading causes of AI/AN deaths (1996-1998) for ages 55 to 64 years were diseases of the heart and malignant neoplasms. For the U.S. all-races and U.S. white populations (1997) the ranking of these two leading causes of death was in reverse order.

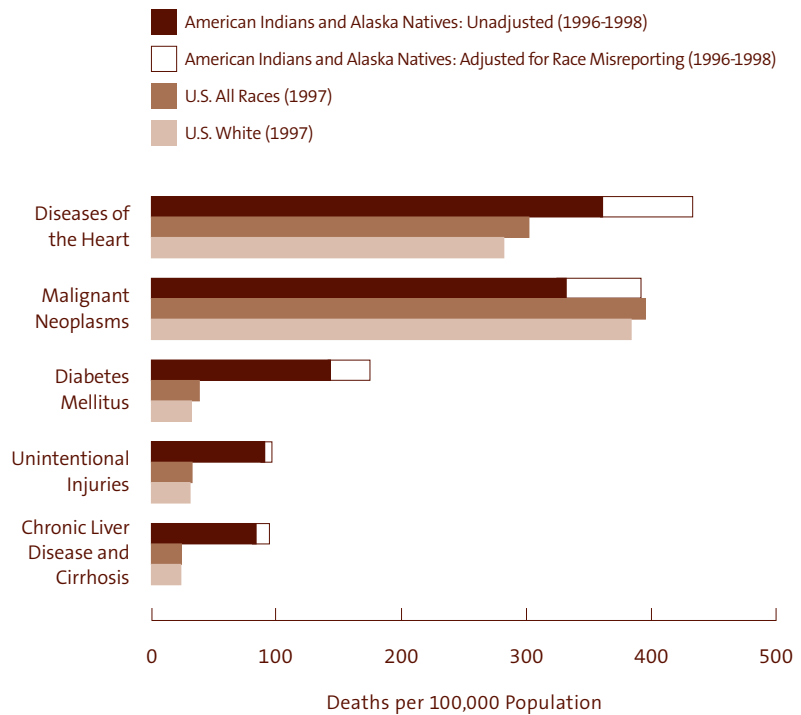


Table 4.6

## Ten Leading Causes of Death for Decedents 55 to 64 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Adjusted <sup>1</sup>	Rate Unadjusted	Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>3,295</b>	<b>3,834</b>	<b>1,410.9</b>	<b>1,641.7</b>	<b>1,063.6</b>	<b>1,000.5</b>	<b>1.5</b>	<b>1.6</b>
Diseases of the heart	844	1,019	361.4	436.3	302.4	282.3	1.4	1.5
Malignant neoplasms	776	912	332.3	390.5	395.7	384.3	1.0	1.0
Diabetes mellitus	335	408	143.4	174.7	38.4	32.1	4.5	5.4
Unintentional injuries	212	229	90.8	98.1	32.6	31.0	3.0	3.2
Motor vehicle	100	109	42.8	46.7	15.3	14.8	3.1	3.2
Other unintentional injuries	112	120	48.0	51.4	17.3	16.2	3.0	3.2
Chronic liver disease and cirrhosis	196	225	83.9	96.3	24.1	23.6	4.0	4.1
Cerebrovascular diseases	131	142	56.1	60.8	44.4	36.9	1.4	1.6
Chronic obstructive pulmonary diseases and allied conditions	91	106	39.0	45.4	46.3	47.8	1.0	0.9
Pneumonia and influenza	64	68	27.4	29.1	17.2	15.6	1.7	1.9
Nephritis, nephrotic syndrome, and nephrosis	46	50	19.7	21.4	8.4	6.4	2.5	3.3
Septicemia	38	40	16.3	17.1	8.5	6.8	2.0	2.5
All other causes	562	635						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.7

Death Rates, Leading Causes: 65 Years of Age and Older

The two leading causes of AI/AN deaths (1996-1998) for 65 years of age and older were diseases of the heart and malignant neoplasms. For the U.S. all-races and U.S. white populations (1997) diseases of the heart and malignant neoplasms were also the two leading causes of death.

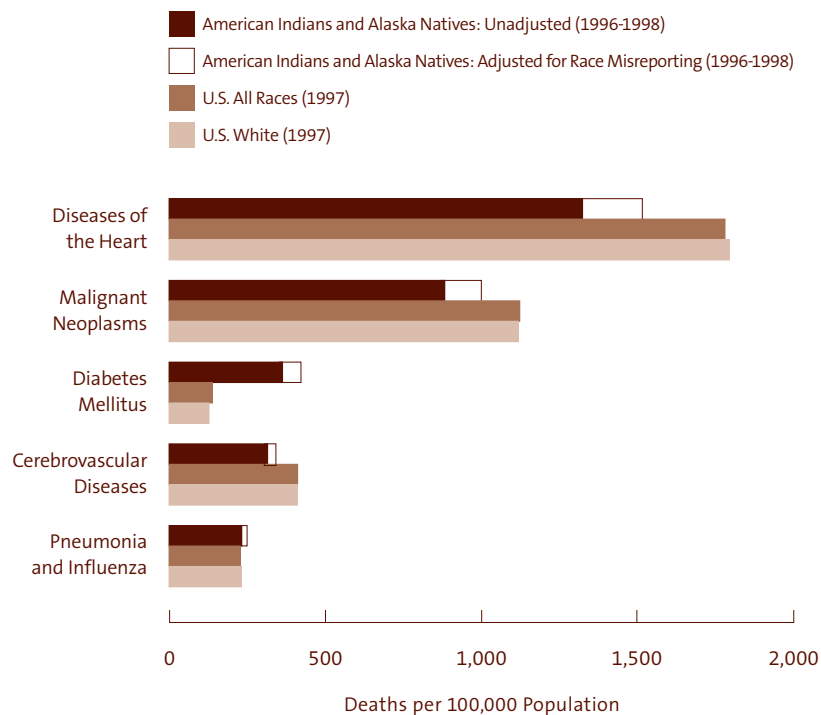


Table 4.7

Ten Leading Causes of Death for Decedents 65 Years of Age and Older

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

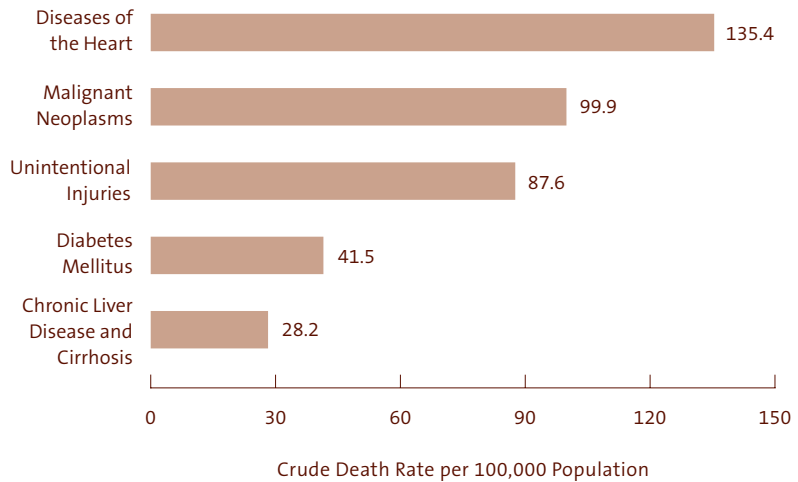
Cause of Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>11,069</b>	<b>12,447</b>	<b>4,516.7</b>	<b>5,079.0</b>	<b>5,073.6</b>	<b>5,093.3</b>	<b>1.0</b>	<b>1.0</b>
Diseases of the heart	3,247	3,760	1,324.9	1,534.3	1,781.1	1,795.1	0.9	0.9
Malignant neoplasms	2,165	2,459	883.4	1,003.4	1,123.7	1,118.6	0.9	0.9
Diabetes mellitus	891	1,039	363.6	424.0	138.8	128.0	3.1	3.3
Cerebrovascular diseases	774	849	315.8	346.4	411.9	411.3	0.8	0.8
Pneumonia and influenza	571	614	233.0	250.5	227.6	231.6	1.1	1.1
Chronic obstructive pulmonary diseases and allied conditions	524	582	213.8	237.5	277.1	291.0	0.9	0.8
Unintentional injuries	383	400	156.3	163.2	92.1	93.1	1.8	1.8
Motor vehicle	119	125	48.6	51.0	23.6	23.6	2.2	2.2
Other unintentional injuries	264	275	107.7	112.2	68.6	69.5	1.6	1.6
Nephritis, nephrotic syndrome, and nephrosis	219	241	89.4	98.3	63.9	60.5	1.5	1.6
Chronic liver disease and cirrhosis	171	183	69.8	74.7	30.0	31.3	2.5	2.4
Septicemia	148	154	60.4	62.8	53.1	49.3	1.2	1.3
All other causes	1,976	2,166						

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.

**Chart 4.8****Death Rates for Leading Causes**  
American Indians and Alaska Natives (1996-1998)

The two leading causes of AI/AN deaths (1996-1998) for all ages were diseases of the heart and malignant neoplasms.

**Table 4.8****Ten Leading Causes of Death for Decedents of All Ages**

American Indians and Alaska Natives, IHS Service Area, 1996-1998

(Crude Rate per 100,000 Population)

Cause of Death	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Causes</b>	<b>23,508</b>	<b>26,967</b>	<b>547.7</b>	<b>698.1</b>
Diseases of the heart	4,967	5,810	115.7	135.4
Malignant neoplasms	3,737	4,289	87.1	99.9
Unintentional injuries	3,245	3,761	75.6	87.6
Motor vehicle	1,855	2,197	43.2	51.2
Other unintentional injuries	1,390	1,564	32.4	36.4
Diabetes mellitus	1,511	1,780	35.2	41.5
Chronic liver disease and cirrhosis	1,053	1,209	24.5	28.2
Cerebrovascular diseases	1,061	1,164	24.7	27.1
Pneumonia and influenza	845	913	19.7	21.3
Suicide	711	818	16.6	19.1
Chronic obstructive pulmonary diseases	675	752	15.7	17.5
Homicide and legal intervention	514	593	12.0	13.8
All other causes	5,189	5,878		

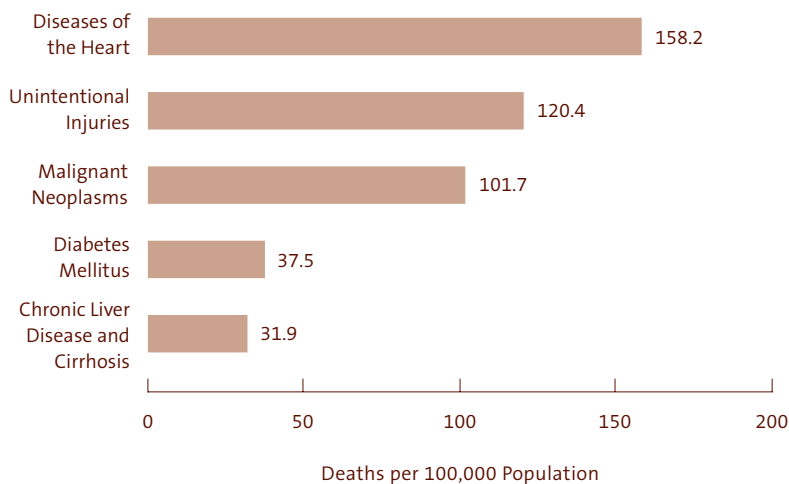
<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths.



**Chart 4.9****Death Rates for Leading Causes: Males**  
American Indians and Alaska Natives (1996-1998)

The two leading causes of deaths for AI/AN males (1996-1998) were diseases of the heart and unintentional injuries.

**Chart 4.10****Death Rates for Leading Causes: Females**  
American Indians and Alaska Natives (1996-1998)

The two leading causes of deaths for AI/AN females (1996-1998) were diseases of the heart and malignant neoplasms.

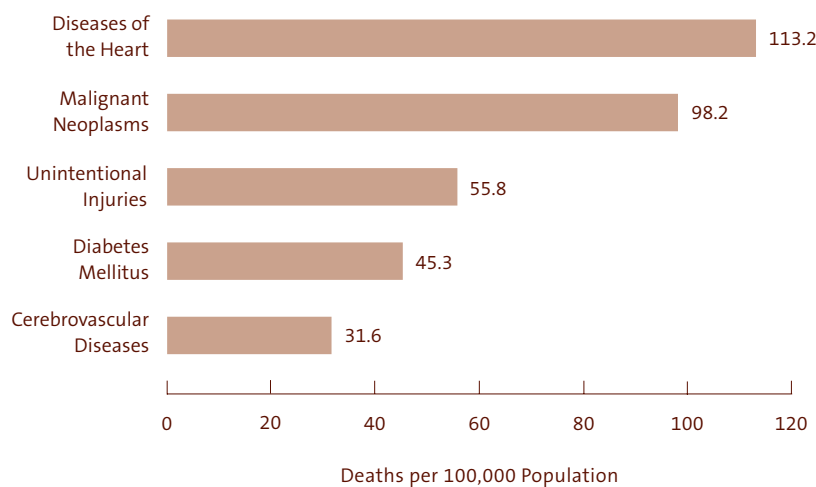


Table 4.9

## Leading Causes of Death by Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998

(Rate per 100,000 Population)

Cause of Death	MALE			
	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Causes</b>	<b>13,155</b>	<b>15,034</b>	<b>622.0</b>	<b>710.7</b>
Diseases of the heart	2,838	3,345	134.2	158.2
Unintentional injuries	2,230	2,546	105.5	120.4
Motor vehicle	1,220	1,409	57.7	66.6
Other unintentional injuries	1,010	1,137	47.8	53.8
Malignant neoplasms	1,884	2,151	89.1	101.7
Diabetes mellitus	680	794	32.2	37.5
Chronic liver disease and cirrhosis	599	675	28.3	31.9
Suicide	573	643	27.1	30.4
Pneumonia and influenza	462	500	21.8	23.6
Cerebrovascular diseases	435	476	20.6	22.5
Homicide and legal intervention	393	443	18.6	20.9
Chronic obstructive pulmonary diseases and allied conditions	380	425	18.0	20.1
All other causes	2,681	3,036		
Cause of Death	FEMALE			
	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Causes</b>	<b>10,353</b>	<b>11,933</b>	<b>475.5</b>	<b>548.1</b>
Diseases of the heart	2,129	2,465	97.8	113.2
Malignant neoplasms	1,853	2,138	85.1	98.2
Unintentional injuries	1,015	1,215	46.7	55.8
Motor vehicle	635	788	29.2	36.2
Other unintentional injuries	380	427	17.5	19.6
Diabetes mellitus	831	986	38.2	45.3
Cerebrovascular diseases	626	688	28.8	31.6
Chronic liver disease and cirrhosis	454	534	20.9	24.5
Pneumonia and influenza	383	413	17.6	19.0
Chronic obstructive pulmonary diseases and allied conditions	295	327	13.5	15.0
Nephritis, nephrotic syndrome, and nephrosis	172	186	7.9	8.5
Suicide	138	175	6.3	8.0
All other causes	2,457	2,806		

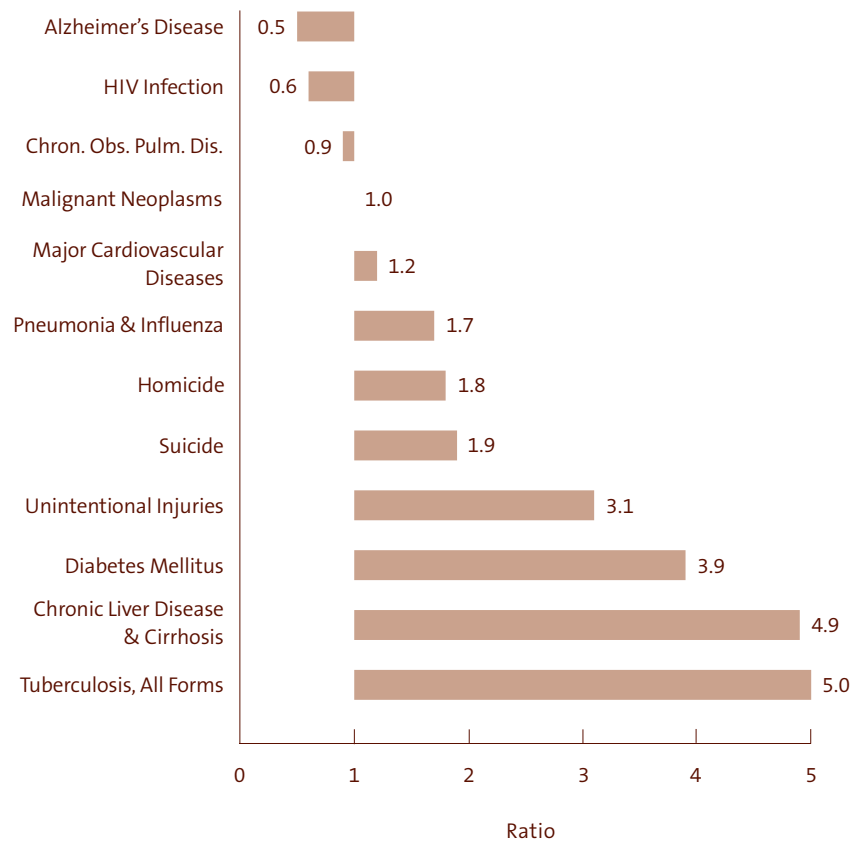
<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Causes of death listed are based on the order of adjusted number of deaths. During 1996-98 there were 103 male deaths and 27 female deaths (adjusted counts) due to HIV infection among the AI/AN population residing in the IHS service delivery area.

**Chart 4.11**

**Selected Age-Adjusted Death Rates: Ratio of American Indians and Alaska Natives (1996-1998) to U.S. All-Races (1997)**

The AI/AN age-adjusted death rates for all causes of death for years 1996-1998 is 1.5 times the rate for U.S. all-races (1997); tuberculosis (5.0 times), chronic liver disease and cirrhosis (4.9 times), diabetes (3.9 times), and unintentional injuries (3.1). AI/AN rates were below those of the U.S. all-races for Alzheimer's disease (0.5 times), HIV infection (0.6 times), chronic obstructive pulmonary diseases (0.9 times), and malignant neoplasms (1.0 times). These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on the state death certificates.



**Table 4.11****Age-Adjusted Death Rates**

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Cause of Death	American Indian and Alaska Native		U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Unadjusted	Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
<b>All Causes</b>	<b>620.7</b>	<b>715.2</b>	<b>479.1</b>	<b>456.5</b>	<b>1.5</b>	<b>1.6</b>
Major cardiovascular diseases	168.4	195.9	166.1	159.1	1.2	1.2
Diseases of the heart	132.9	157.1	130.5	125.9	1.2	1.2
Cerebrovascular diseases	26.7	29.5	25.9	24.0	1.1	1.2
Atherosclerosis	2.4	2.5	2.1	2.1	1.2	1.2
Hypertension	2.4	2.5	2.3	1.9	1.1	1.3
Unintentional injuries	82.2	94.7	30.1	29.6	3.1	3.2
Motor vehicle	46.6	54.8	15.9	15.9	3.4	3.4
Other unintentional injuries	35.6	39.9	14.2	13.7	2.8	2.9
Malignant neoplasms	107.5	124.0	125.6	122.9	1.0	1.0
Chronic liver disease and cirrhosis	31.7	36.4	7.4	7.3	4.9	5.0
Diabetes mellitus	44.4	52.8	13.5	11.9	3.9	4.4
Pneumonia and influenza	19.8	21.5	12.9	12.4	1.7	1.7
Suicide	17.6	20.2	10.6	11.3	1.9	1.8
Homicide	12.7	14.5	8.0	4.7	1.8	3.1
Chronic obstructive pulmonary diseases and allied conditions	17.5	19.7	21.1	21.7	0.9	0.9
Tuberculosis, all forms	1.5	1.5	0.3	0.2	5.0	7.5
Human immunodeficiency virus (HIV) infection	2.9	3.3	5.8	3.3	0.6	1.0
Alzheimer's disease	1.0	1.3	2.7	2.9	0.5	0.4

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

SOURCE: U.S. Mortality Rates: Monthly Vital Statistics Report, NCHS, DHHS, Advance Report of Final Mortality Statistics, 1997, Vol. 47, No. 19, June 30, 1999, Table 14.

Chart 4.12

**Age-Specific Death Rates: Ratio of American Indians and Alaska Natives (1996-1998) to U.S. All-Races (1997)**

The age-specific death rate for AI/AN (1996-1998) was more than double the U.S. all-races rate (1997) for age groups 1 to 4 and 15 through 54. The AI/AN rate was less than the U.S. all-races rate for only one age group, 85 years and older. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

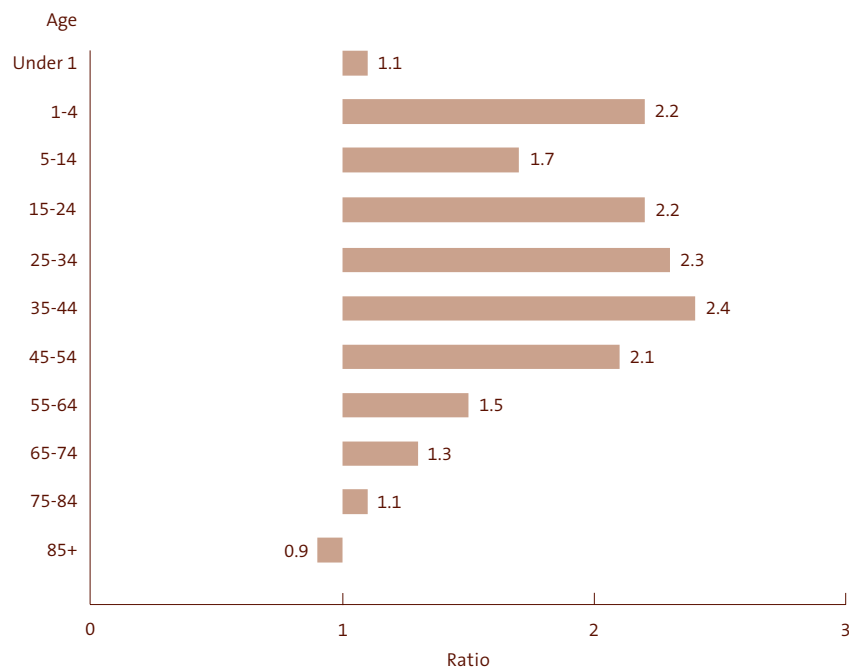
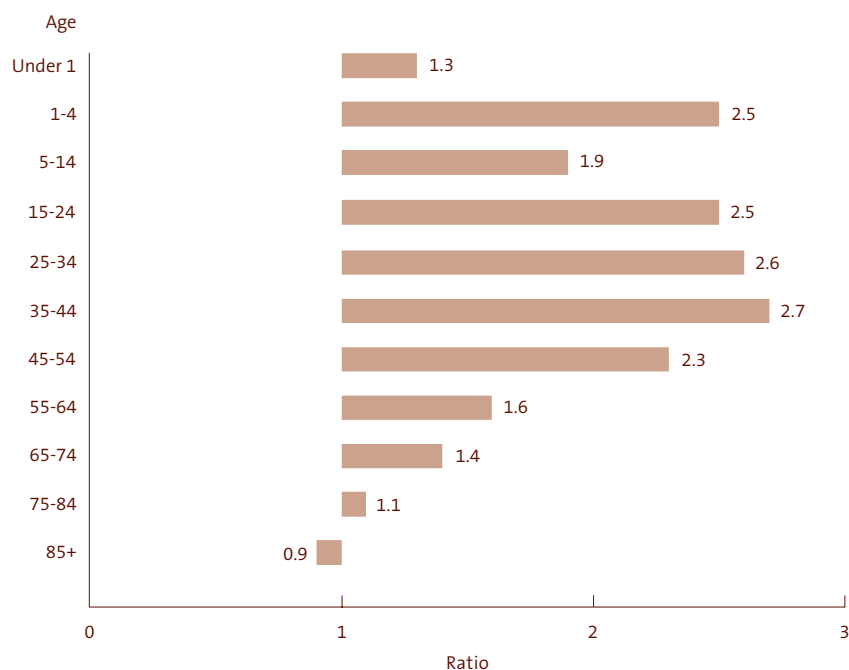


Chart 4.13

**Age-Specific Death Rates: Ratio of American Indians and Alaska Natives (1996-1998) to U.S. White (1997)**

The age-specific death rate for AI/AN (1996-1998) was more than double the U.S. white rate (1997) for age groups 1 to 4 and 15 through 54. The AI/AN rate was less than the U.S. white rate for only one age group, 85 years and older. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.



**Table 4.12****Age-Specific Death Rates**

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and Selected U.S. Populations, 1997

*(Rate per 100,000 Population)*

Age Group	American Indian and Alaska Native				U.S. Rate			Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number		Rate		All Races	White	Black	U.S. All Races	U.S. White
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>					
Under 1	780	916	693.3	814.2	738.7	613.7	1,529.8	1.1	1.3
1-4	251	315	62.2	78.1	35.8	31.6	59.2	2.2	2.5
5-14	291	326	31.5	35.3	20.8	18.9	31.1	1.7	1.9
15-24	1,206	1,474	158.2	193.4	86.2	77.5	139.2	2.2	2.5
25-34	1,596	1,919	219.6	264.0	115.0	100.6	217.1	2.3	2.6
35-44	2,310	2,637	423.5	483.5	203.2	178.4	397.9	2.4	2.7
45-54	2,704	3,090	795.3	908.9	430.8	389.3	827.8	2.1	2.3
55-64	3,295	3,834	1,410.9	1,641.7	1,063.6	1,000.5	1,746.6	1.5	1.6
65-74	4,356	5,023	2,874.0	3,314.0	2,509.8	2,451.2	3,392.4	1.3	1.4
75-84	3,973	4,577	5,436.6	6,263.1	5,728.2	5,699.0	6,640.3	1.1	1.1
85+	2,740	2,847	13,418.9	13,942.9	15,345.2	15,559.7	14,398.7	0.9	0.9

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.14

## Deaths by Age

Of all AI/AN people who died during 1996-1998, 28 percent were under 45 years of age. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates. This compared to 9 percent for the U.S. all-races population (1997).

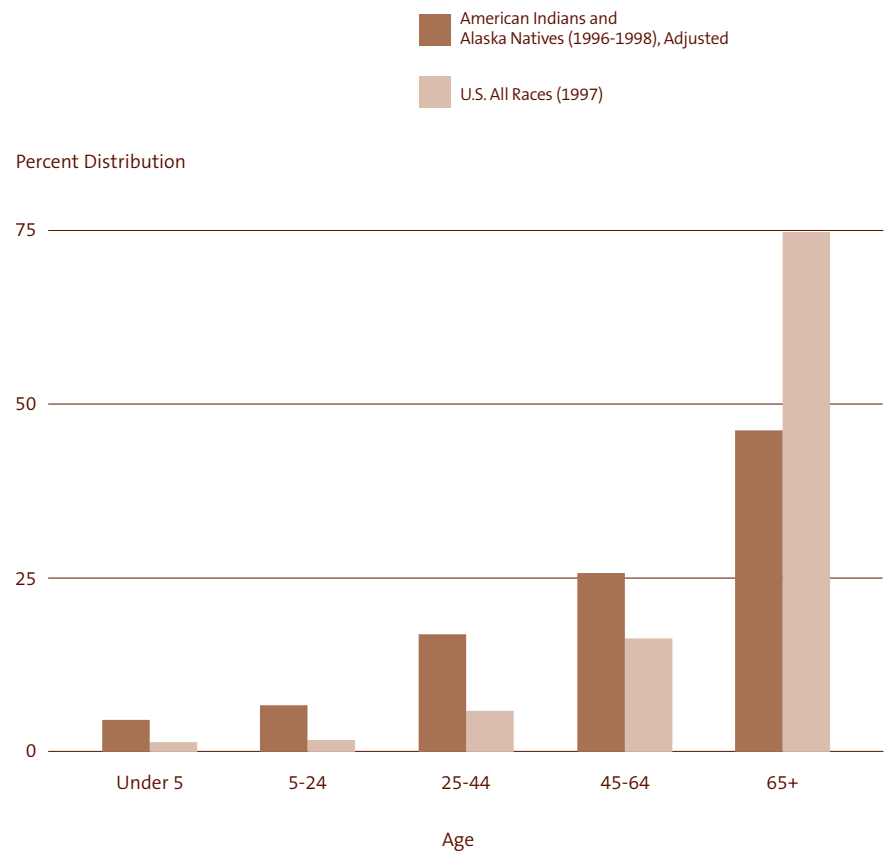


Chart 4.15

## Deaths by Age and Race

Nineteen (19) percent of black decedents and 7 percent of white decedents in 1997 were under 45 years of age.

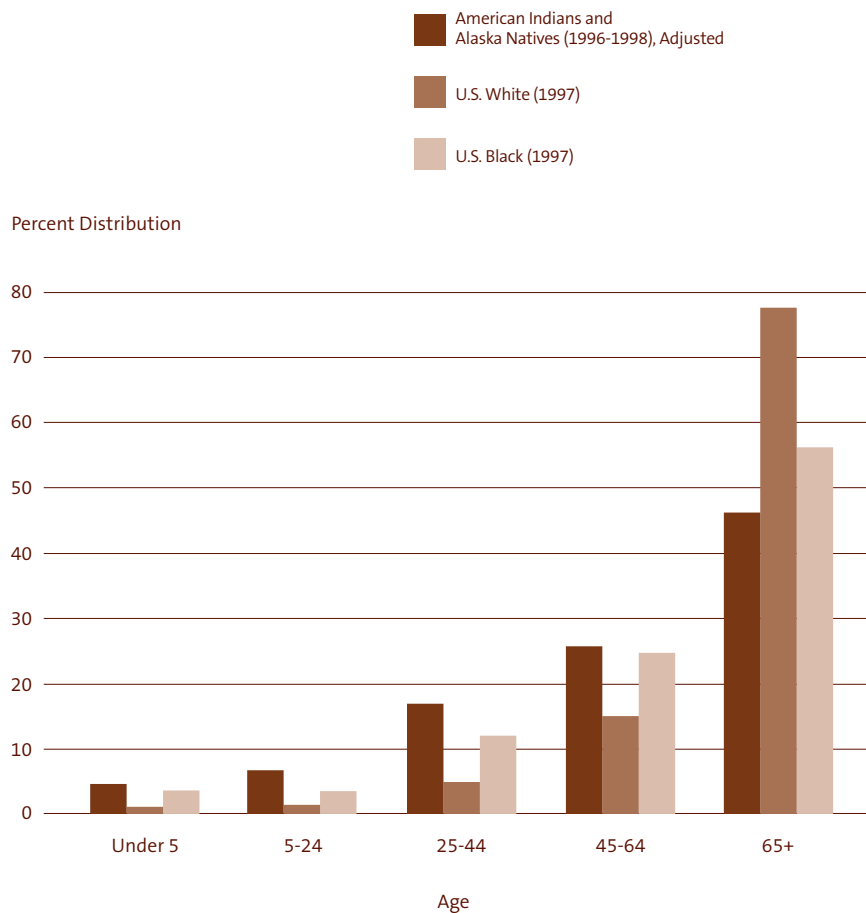




Chart 4.16

**Deaths by Age and Sex**  
American Indians and Alaska Natives (1996-1998)

Thirty-three (33) percent of AI/AN male deaths (1996-1998) pertained to ages under 45. This compared with 23 percent for AI/AN female deaths. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

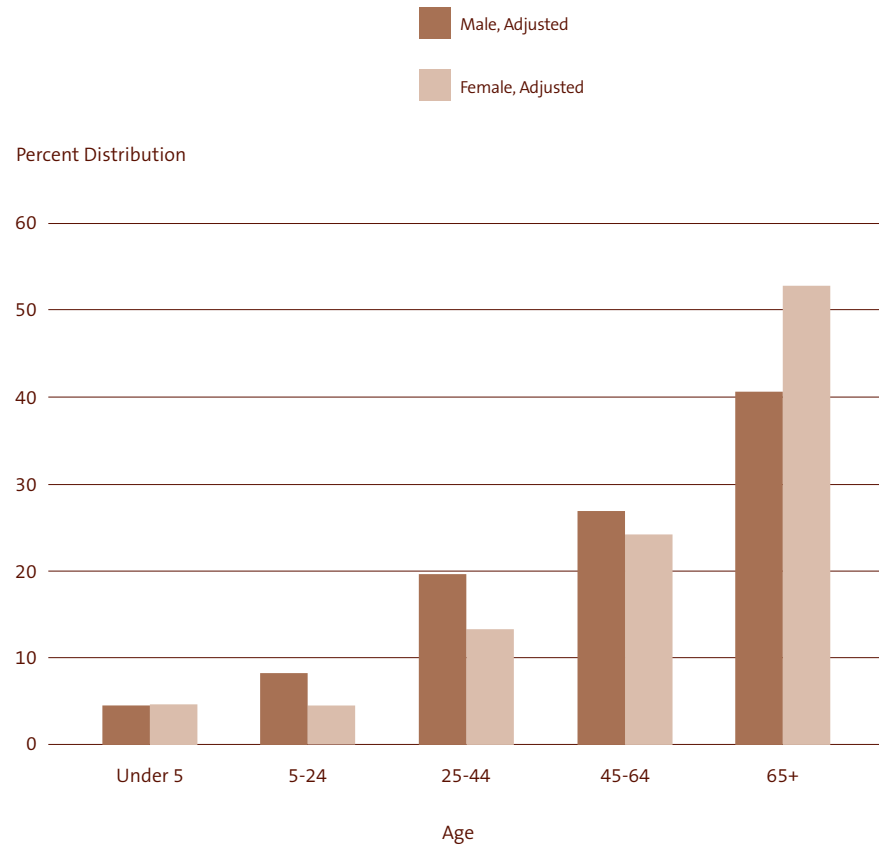


Table 4.14

## Number and Percent Distribution of Deaths by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and Selected U.S. Populations, 1997

(Rate per 100,000 Population)

American Indian and Alaska Native												
Age Group	Both Sexes				Male				Female			
	Number		Percent		Number		Percent		Number		Percent	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Ages</b>	<b>23,508</b>	<b>26,964</b>	<b>100.0</b>	<b>100.0</b>	<b>13,155</b>	<b>15,032</b>	<b>100.0</b>	<b>100.0</b>	<b>10,353</b>	<b>11,932</b>	<b>100.0</b>	<b>100.0</b>
Under 1	780	916	3.3	3.4	438	514	3.3	3.4	342	402	3.3	3.4
1 to 4	251	315	1.1	1.2	126	160	1.0	1.1	125	155	1.2	1.3
5 to 14	291	326	1.2	1.2	175	194	1.3	1.3	116	132	1.1	1.1
15 to 24	1,206	1,474	5.1	5.5	906	1,052	6.9	7.0	300	422	2.9	3.5
25 to 34	1,596	1,919	6.8	7.1	1,115	1,290	8.5	8.6	481	629	4.6	5.3
35 to 44	2,310	2,637	9.8	9.8	1,498	1,675	11.4	11.1	812	962	7.8	8.1
45 to 54	2,704	3,090	11.5	11.5	1,620	1,828	12.3	12.2	1,084	1,262	10.5	10.6
55 to 64	3,295	3,834	14.0	14.2	1,915	2,210	14.6	14.7	1,380	1,624	13.3	13.6
65 to 74	4,356	5,023	18.5	18.6	2,358	2,718	17.9	18.1	1,998	2,305	19.3	19.3
75 to 84	3,973	4,577	16.9	17.0	1,923	2,252	14.6	15.0	2,050	2,325	19.8	19.5
85 and over	2,740	2,847	11.7	10.6	1,076	1,134	8.2	7.5	1,664	1,713	16.1	14.4
Age Not Stated	6	6	0.0	0.0	5	5	0.0	0.0	1	1	0.0	0.0
United States												
Age Group	All Races		White		Black							
<b>Number of Deaths, All Ages</b>	<b>2,314,245</b>		<b>1,996,393</b>		<b>276,520</b>							
<b>Percent Distribution, All Ages</b>	<b>100.0</b>		<b>100.0</b>		<b>100.0</b>							
Under 1	1.2		0.9		3.1							
1 to 4	0.2		0.2		0.5							
5 to 14	0.3		0.3		0.7							
15 to 24	1.4		1.1		2.8							
25 to 34	2.0		1.6		4.2							
35 to 44	3.9		3.3		7.8							
45 to 54	6.3		5.6		10.7							
55 to 64	10.0		9.4		14.0							
65 to 74	20.1		20.0		20.2							
75 to 84	28.9		30.3		20.8							
85 and over	25.7		27.3		15.2							
Age Not Stated	0.0		0.0		0.0							

0.0 Quantity more than zero but less than 0.05.

<sup>1</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.17

## Age-Adjusted Injury and Poisoning Deaths

The AI/AN age-adjusted death rate due to injury and poisoning (unintentional injuries, suicide, homicide, and other injuries) in 1996-1998 (132.0 deaths per 100,000 population) is more than half of what it was in 1972-1974 (264.2). The 1996-1998 rate is 2.6 times the U.S. all-races rate of 50.2 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

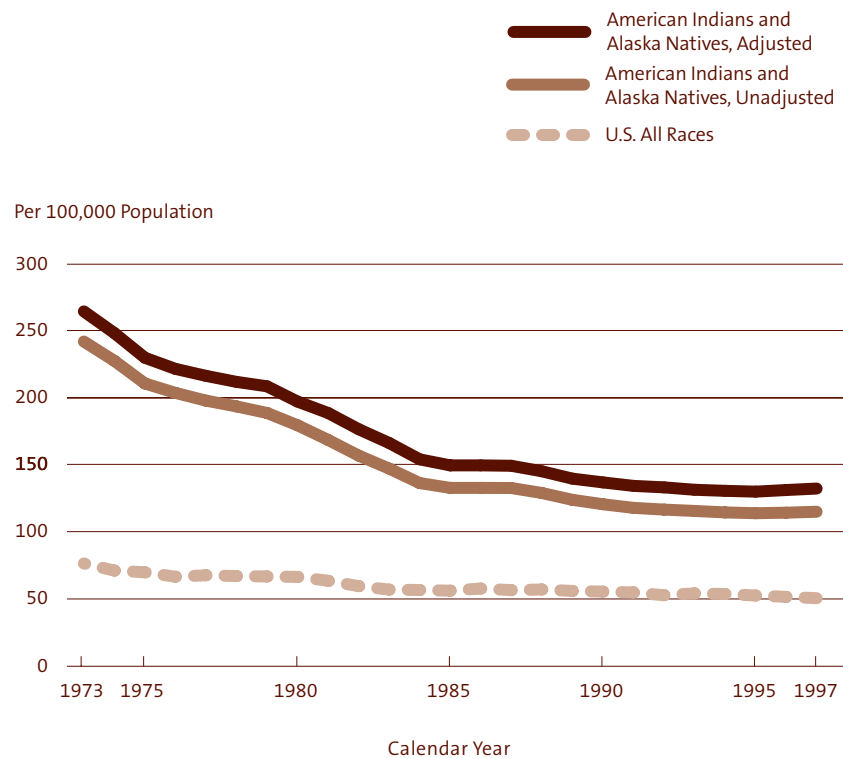


Table 4.17

Injury and Poisoning<sup>1</sup> Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>2</sup> to:	
	Number Unadjusted	Number Adjusted <sup>2</sup>	Rate Unadjusted	Rate Adjusted <sup>2</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	1,541	1,790						
1996-1998 (1997)	1,549	1,801	114.7	132.0	50.2	47.1	2.6	2.8
1995-1997 (1996)	1,470	1,686	114.0	130.9	51.2	47.9	2.6	2.7
1994-1996 (1995)	1,450	1,669	113.6	129.7	52.2	49.0	2.5	2.6
1993-1995 (1994)	1,464	1,665	114.2	130.3	53.3	48.4	2.4	2.7
1992-1994 (1993)	1,403	1,609	115.3	131.1	53.8	48.9	2.4	2.7
1991-1993 (1992)	1,369	1,564	116.3	132.9	52.4	48.0	2.5	2.8
1990-1992 (1991)	1,397	1,610	117.6	134.0	54.5	49.8	2.5	2.7
1989-1991 (1990)	1,349	1,532	120.3	136.6	55.1	50.8	2.5	2.7
1988-1990 (1989)	1,367	1,548	123.6	139.4	55.6	50.9	2.5	2.7
1987-1989 (1988)	1,391	1,567	128.7	144.9	56.7	52.7	2.6	2.7
1986-1988 (1987)	1,390	1,568	132.4	149.0	56.2	52.8	2.7	2.8
1985-1987 (1986)	1,375	1,551	132.5	149.3	57.4	54.1	2.6	2.8
1984-1986 (1985)	1,275	1,440	132.5	149.3	55.8	53.0	2.7	2.8
1983-1985 (1984)	1,254	1,411	136.1	153.8	56.3	53.7	2.7	2.9
1982-1984 (1983)	1,280	1,455	146.9	166.0	56.6	53.6	2.9	3.1
1981-1983 (1982)	1,351	1,520	156.6	176.3	59.2	55.9	3.0	3.2
1980-1982 (1981)	1,344	1,494	168.3	188.4	63.2	59.5	3.0	3.2
1979-1981 (1980)	1,418	1,588	179.2	196.9	66.1	61.9	3.0	3.2
1978-1980 (1979)	1,472	1,611	188.4	208.3	66.4	62.1	3.1	3.4
1977-1979 (1978)	1,383	1,525	193.3	211.6	66.7	62.6	3.2	3.4
1976-1978 (1977)	1,346	1,464	197.6	216.1	67.3	62.8	3.2	3.4
1975-1977 (1976)	1,321	1,441	203.4	221.3	66.2	63.8	3.3	3.5
1974-1976 (1975)	1,283	1,392	210.4	229.6	69.5	63.8	3.3	3.6
1973-1975 (1974)	1,229	1,345	227.3	248.0	70.8	64.6	3.5	3.8
1972-1974 (1973)	1,381	1,504	241.7	264.2	76.1	69.4	3.5	3.8
(1972)	1,241	1,353						
1954-1956 (1955)	2,273		200.3		69.2	51.9		

<sup>1</sup> Includes the following deaths and ICD-9 codes: motor vehicle unintentional injuries—E-810-E825; other unintentional injuries—E800-E807, E826-E949; suicide—E950-E959; homicide—E960-E978; injury undetermined whether unintentionally or purposely inflicted—E980-E989; and injury resulting from operations of war—E990-E999.

<sup>2</sup> Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.18

### Injury and Poisoning Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific death rate due to injury and poisoning for AI/AN males (1996-1998) was higher for all age groups in comparison with AI/AN females. The AI/AN male rate was over 200 deaths per 100,000 population for all age groups except under 15 and 55 to 64 years. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on the state death certificates.

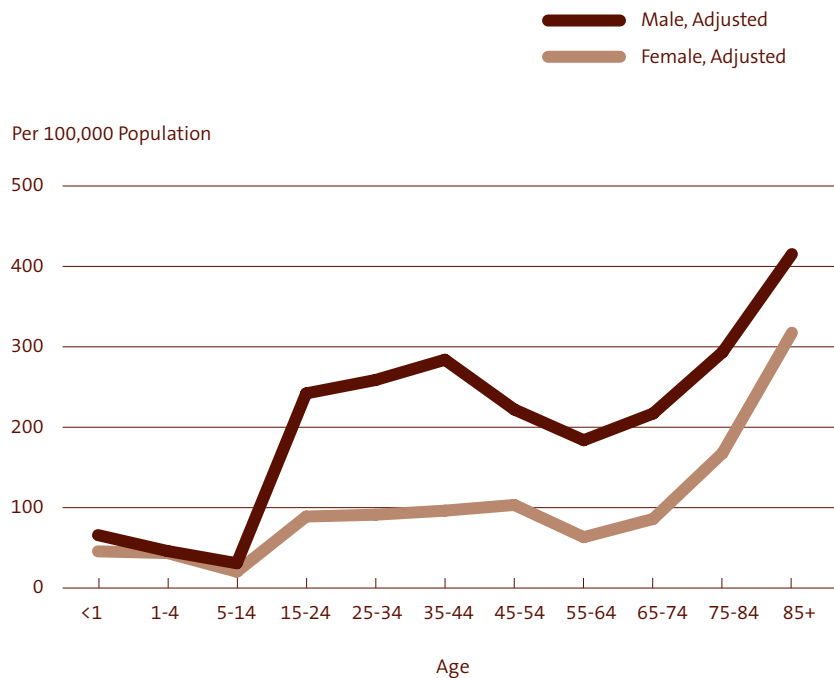


Table 4.18

## Injury and Poisoning Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	46.2	55.1	54.6	65.1	37.7	44.9
1-4 years	35.4	44.1	35.6	45.3	35.3	42.8
5-14 years	22.5	24.9	27.1	30.1	17.8	19.6
15-24 years	136.4	166.4	207.7	241.3	62.2	88.2
25-34 years	143.5	172.5	221.5	258.0	68.7	90.5
35-44 years	163.9	186.3	251.7	283.2	81.7	95.5
45-54 years	144.7	159.4	202.9	221.3	91.4	102.6
55-64 years	110.5	118.6	170.2	183.1	58.5	62.5
65-74 years	135.9	143.2	202.9	216.3	82.8	85.2
75-84 years	205.3	217.6	275.6	292.6	157.9	167.1
85 years +	352.6	352.6	414.6	414.6	316.8	316.8

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	30.1	33.5	26.5	24.6	27.9	21.2
1-4 years	15.8	18.1	13.4	13.8	16.0	11.5
5-14 years	10.9	13.6	8.1	9.8	12.4	7.1
15-24 years	66.2	101.4	29.0	59.9	88.9	28.9
25-34 years	61.2	95.9	26.4	56.5	87.3	24.9
35-44 years	59.9	90.7	29.4	57.1	85.8	28.1
45-54 years	53.4	80.3	27.6	51.2	76.3	26.7
55-64 years	51.3	76.7	28.3	49.8	73.6	27.7
65-74 years	64.7	95.2	40.1	63.9	93.7	39.5
75-84 years	126.7	181.9	90.5	127.4	183.2	90.7
85 years +	302.7	431.8	250.7	311.5	446.8	257.6

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.19

## Age-Adjusted Unintentional Injury Death Rates

The age-adjusted unintentional injury death rate for AI/AN has decreased over 54 percent from 206.7 (1972-1974) to that of 94.7 for the 1996-1998 three-year period specified. However, during the last ten years the AI/AN rate decline has slowed to 2 percent with a slight increase during this latest three-year period specified. The 1996-1998 rate is more than triple the U.S. all-races rate of 30.1 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

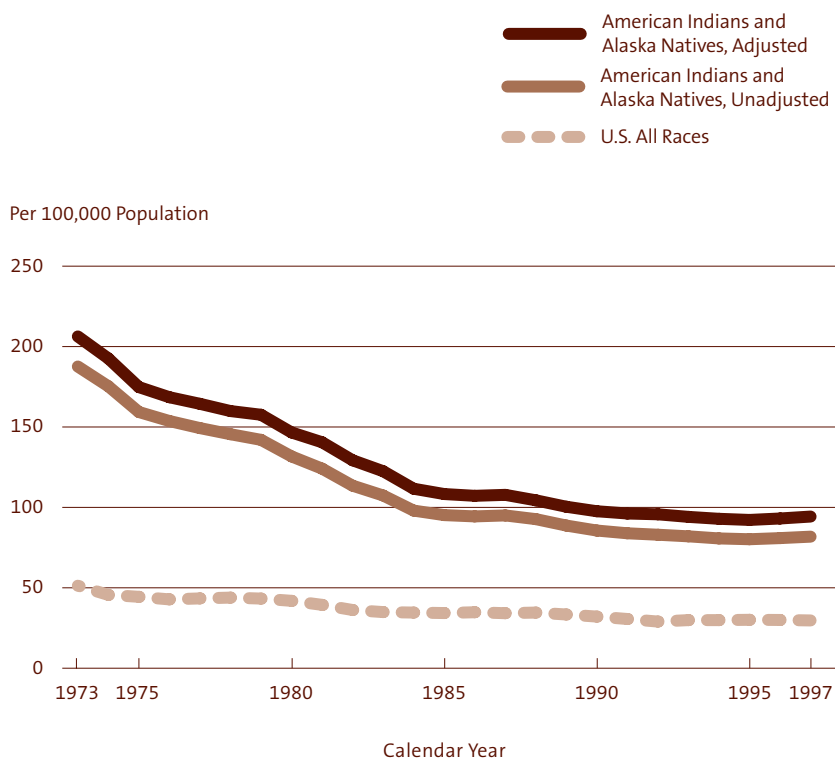


Table 4.19

## Unintentional Injury Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native						Ratio of American Indian and Alaska Native <sup>1</sup> to:			
	Total Deaths		All Unintentional Injuries		Motor Vehicle		U.S. All Races		U.S. White	
	Number		Rate		Rate		All	Motor	All	Motor
	Unadjusted		Adjusted <sup>1</sup>		Adjusted <sup>1</sup>		Unintentional	Vehicle	Unintentional	Vehicle
							Injuries		Injuries	
(1998)	1,087	1,272								
1996-1998 (1997)	1,103	1,277	82.2	94.7	46.6	54.8	30.1	15.9	29.6	15.9
1995-1997 (1996)	1,055	1,212	81.3	93.5	46.5	54.7	30.4	16.2	29.9	16.3
1994-1996 (1995)	1,016	1,180	80.6	92.6	45.9	54.0	30.5	16.3	29.9	16.4
1993-1995 (1994)	1,022	1,173	81.1	93.3	45.4	53.4	30.3	16.1	29.5	16.2
1992-1994 (1993)	1,007	1,168	82.4	94.5	45.5	53.3	30.3	16.0	29.6	16.1
1991-1993 (1992)	977	1,126	83.4	96.1	47.0	55.4	29.4	15.8	28.8	15.9
1990-1992 (1991)	988	1,154	84.3	96.6	47.5	55.8	31.0	17.0	30.3	17.2
1989-1991 (1990)	970	1,101	86.0	98.0	48.4	56.3	32.5	18.5	31.8	18.6
1988-1990 (1989)	969	1,097	89.1	100.8	49.6	57.2	33.8	18.9	32.9	19.1
1987-1989 (1988)	1,012	1,148	93.1	104.8	52.2	59.9	35.0	19.7	34.1	20.0
1986-1988 (1987)	1,000	1,135	95.4	108.2	54.3	62.7	34.6	19.5	33.9	19.8
1985-1987 (1986)	983	1,120	94.8	107.6	54.2	62.5	35.2	19.4	34.5	19.8
1984-1986 (1985)	913	1,034	95.6	108.7	53.0	61.0	34.7	18.8	34.1	19.1
1983-1985 (1984)	921	1,049	98.4	112.0	53.2	62.2	35.0	19.1	34.6	19.6
1982-1984 (1983)	907	1,038	107.8	122.9	57.0	66.5	35.3	18.5	34.7	19.0
1981-1983 (1982)	999	1,136	113.9	129.7	62.1	72.1	36.6	19.3	36.1	19.8
1980-1982 (1981)	975	1,101	124.5	140.9	69.4	79.9	39.8	21.8	39.3	22.5
1979-1981 (1980)	1,058	1,195	132.1	147.0	75.2	85.3	42.3	22.9	41.5	23.4
1978-1980 (1979)	1,095	1,200	142.4	158.0	80.4	90.4	43.7	23.7	42.9	24.3
1977-1979 (1978)	1,071	1,189	145.9	160.3	82.4	91.3	44.3	23.4	43.3	23.8
1976-1978 (1977)	1,007	1,102	149.7	164.8	85.0	94.2	43.8	22.4	42.5	22.5
1975-1977 (1976)	995	1,093	154.1	168.9	86.9	96.0	43.2	21.5	41.8	21.5
1974-1976 (1975)	1,000	1,092	159.7	175.2	87.8	97.3	44.8	21.3	43.1	21.2
1973-1975 (1974)	921	1,009	175.7	193.0	97.3	108.4	46.0	21.8	44.3	21.7
1972-1974 (1973)	1,091	1,199	188.0	206.7	104.8	116.5	51.7	26.4	49.5	26.0
(1972)	989	1,084								
1954-1956 (1955)	714		184.0		97.6		54.3	24.6	52.2	24.3

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.20

Unintentional Injury Death Rates by Age and Sex  
American Indians and Alaska Natives (1996-1998)

The age-specific death rate for unintentional injuries for AI/AN males (1996-1998) was higher for all age groups in comparison with AI/AN females. The AI/AN males rates were 2.2 to 3.0 times the AI/AN female rate for age groups 15 through 74 years. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

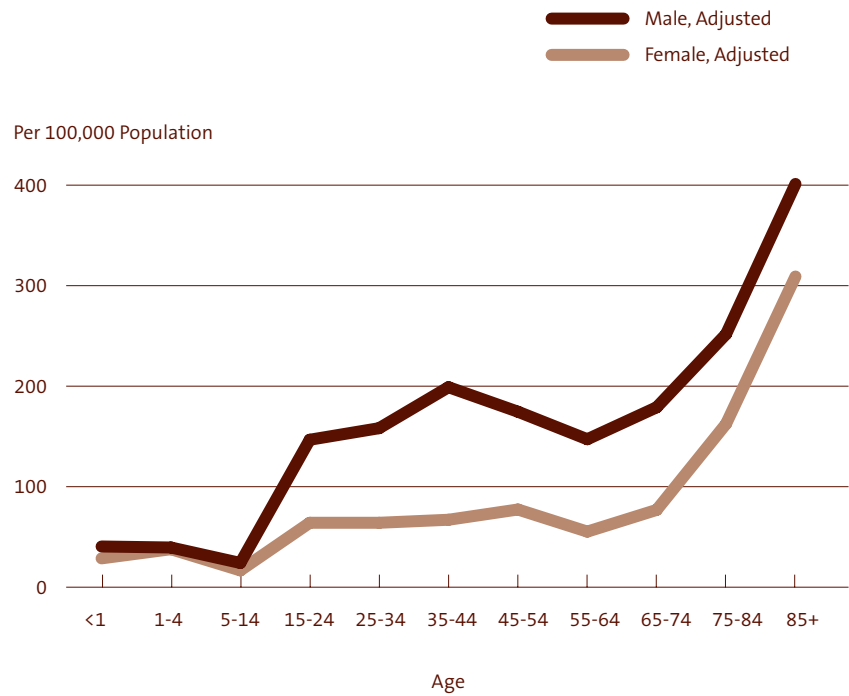


Table 4.20

## Unintentional Injury Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	30.2	34.7	37.0	40.5	23.3	28.7
1-4 years	30.7	38.7	29.7	39.5	31.8	37.8
5-14 years	18.6	20.5	22.0	24.1	15.2	16.7
15-24 years	85.5	106.3	124.9	146.7	44.5	64.1
25-34 years	91.3	110.2	135.2	158.2	49.3	64.1
35-44 years	114.0	130.9	174.0	199.0	57.9	67.1
45-54 years	111.8	123.8	158.0	174.6	69.4	77.3
55-64 years	90.8	98.1	135.2	147.2	52.1	55.3
65-74 years	116.1	122.1	168.6	179.0	74.5	76.9
75-84 years	187.5	198.4	238.2	251.8	153.4	162.5
85 years +	342.8	342.8	401.2	401.2	309.1	309.1

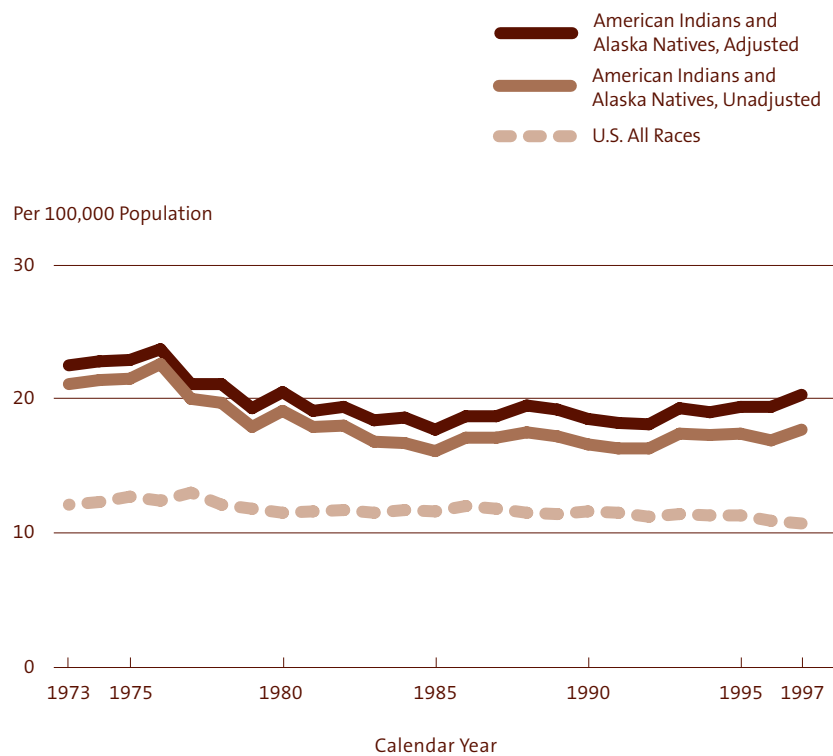
U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	20.1	22.1	18.1	17.0	18.4	15.6
1-4 years	13.1	15.2	10.8	11.8	13.9	9.7
5-14 years	8.7	10.6	6.7	8.0	9.9	6.0
15-24 years	36.5	52.1	20.1	38.3	54.0	21.5
25-34 years	31.8	48.4	15.2	31.7	47.9	15.0
35-44 years	33.0	49.5	16.8	31.9	47.6	16.0
45-54 years	31.0	46.1	16.4	29.2	43.1	15.5
55-64 years	32.6	46.4	20.0	31.0	43.6	19.4
65-74 years	46.4	63.0	32.9	45.2	61.1	32.2
75-84 years	103.4	135.6	82.3	103.5	135.3	82.5
85 years +	276.5	362.9	241.6	284.5	373.9	248.9

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.21

## Age-Adjusted Suicide Death Rates

The age-adjusted suicide death rate for AI/AN decreased 25 percent from a 23.6 high in 1975-1977 to a 17.6 low in 1984-1986. Since then suicide has increased 15 percent to 20.2 in 1996-1998. The 1996-1998 rate is 91 percent higher than the U.S. all-races rate of 10.6 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.



**Table 4.21****Suicide Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	252	283						
1996-1998 (1997)	234	273	17.6	20.2	10.6	11.3	1.9	1.8
1995-1997 (1996)	225	262	16.8	19.3	10.8	11.6	1.8	1.7
1994-1996 (1995)	205	228	17.3	19.3	11.2	11.9	1.7	1.6
1993-1995 (1994)	242	263	17.2	18.9	11.2	11.9	1.7	1.6
1992-1994 (1993)	204	226	17.3	19.2	11.3	12.0	1.7	1.6
1991-1993 (1992)	193	219	16.2	18.0	11.1	11.8	1.6	1.5
1990-1992 (1991)	184	200	16.2	18.1	11.4	12.1	1.6	1.5
1989-1991 (1990)	195	218	16.5	18.4	11.5	12.2	1.6	1.5
1988-1990 (1989)	192	217	17.1	19.1	11.3	12.0	1.7	1.6
1987-1989 (1988)	185	206	17.4	19.4	11.4	12.2	1.7	1.6
1986-1988 (1987)	187	206	17.0	18.6	11.7	12.5	1.6	1.5
1985-1987 (1986)	158	168	17.0	18.6	11.9	12.7	1.6	1.5
1984-1986 (1985)	172	193	16.0	17.6	11.5	12.3	1.5	1.4
1983-1985 (1984)	148	165	16.6	18.5	11.6	12.4	1.6	1.5
1982-1984 (1983)	161	177	16.7	18.3	11.4	12.2	1.6	1.5
1981-1983 (1982)	154	164	17.9	19.3	11.6	12.4	1.7	1.6
1980-1982 (1981)	157	166	17.8	19.0	11.5	12.2	1.7	1.6
1979-1981 (1980)	146	156	19.0	20.4	11.4	12.1	1.8	1.7
1978-1980 (1979)	162	177	17.8	19.2	11.7	12.4	1.6	1.5
1977-1979 (1978)	117	125	19.6	21.0	12.0	12.7	1.8	1.7
1976-1978 (1977)	161	169	19.9	21.0	12.9	13.6	1.6	1.5
1975-1977 (1976)	143	150	22.5	23.6	12.3	12.9	1.9	1.8
1974-1976 (1975)	139	146	21.4	22.8	12.6	13.3	1.8	1.7
1973-1975 (1974)	122	135	21.3	22.7	12.2	12.8	1.9	1.8
1972-1974 (1973)	116	121	21.0	22.4	12.0	12.6	1.9	1.8
(1972)	113	118						
1954-1956 (1955)	39		11.9		9.9	10.4		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.22

### Suicide Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific suicide death rate (1996-1998) for AI/AN males was higher for all age groups in comparison with AI/AN females. The AI/AN male rate peaked at (60.2 deaths per 100,000 population) for age group 25 to 34 years which is 4.4 times that of the AI/AN female rate (13.7). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

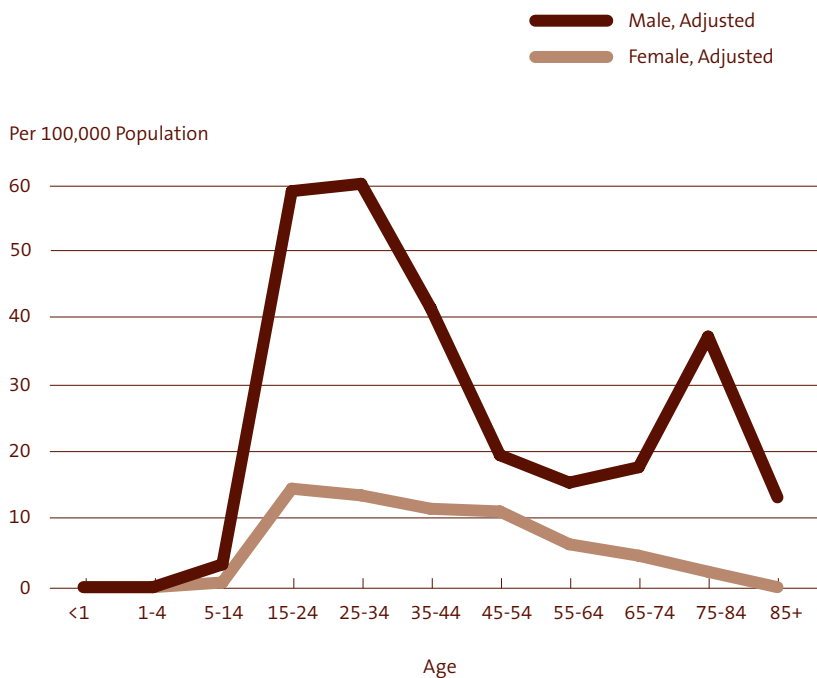


Table 4.22

## Suicide Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	2.0	2.1	3.2	3.4	3.0	0.7
15-24 years	31.7	37.4	51.4	59.1	55.0	14.7
25-34 years	30.7	36.5	52.3	60.2	51.0	13.7
35-44 years	24.0	26.2	39.0	41.7	33.0	11.7
45-54 years	13.8	15.3	19.1	19.7	20.0	11.3
55-64 years	9.8	10.7	14.7	15.6	8.0	6.4
65-74 years	9.9	10.6	16.4	17.9	4.0	4.7
75-84 years	15.1	16.4	34.0	37.4	1.0	2.3
85 years +	4.9	4.9	13.4	13.4	—*	—*

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.8	1.2	0.4	0.8	1.2	0.4
15-24 years	11.4	18.9	3.5	11.9	19.5	3.7
25-34 years	14.3	23.6	5.0	15.2	24.8	5.4
35-44 years	15.3	23.9	6.8	16.7	25.7	7.6
45-54 years	14.7	22.5	7.3	16.1	24.4	8.0
55-64 years	13.5	22.4	5.4	14.6	23.9	5.9
65-74 years	14.4	26.4	4.7	15.3	28.0	4.9
75-84 years	19.3	40.9	5.2	20.5	43.4	5.4
85 years +	20.8	60.3	4.9	22.0	65.0	4.9

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.23

## Age-Adjusted Homicide Death Rates

The age-adjusted homicide death rate for AI/AN has decreased 45 percent from 1972-1974 to 1996-1998 (26.3 and 14.5, respectively). The 1996-1998 rate of 14.5 is 81 percent higher than the U.S. all-races rate of 8.0 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

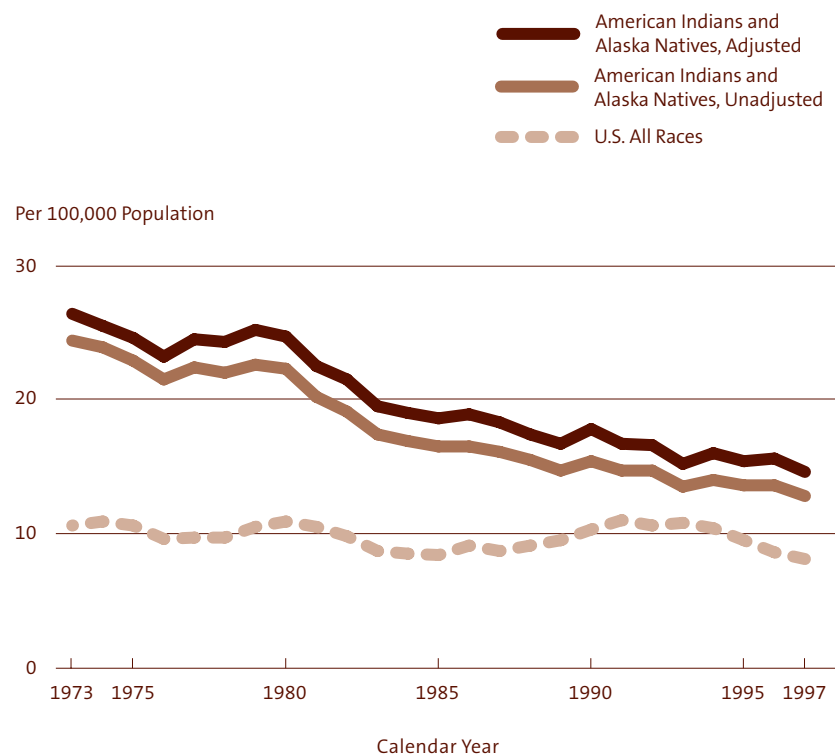


Table 4.23

## Homicide Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	172	199						
1996-1998 (1997)	181	217	12.7	14.5	8.0	4.7	1.8	3.1
1995-1997 (1996)	161	178	13.5	15.5	8.5	4.9	1.8	3.2
1994-1996 (1995)	198	231	13.5	15.3	9.4	5.5	1.6	2.8
1993-1995 (1994)	176	201	13.9	15.9	10.3	5.8	1.5	2.7
1992-1994 (1993)	168	190	13.4	15.1	10.7	6.0	1.4	2.5
1991-1993 (1992)	168	185	14.6	16.5	10.5	6.1	1.6	2.7
1990-1992 (1991)	199	229	14.6	16.6	10.9	6.2	1.5	2.7
1989-1991 (1990)	153	180	15.3	17.7	10.2	5.9	1.7	3.0
1988-1990 (1989)	177	205	14.6	16.6	9.4	5.4	1.8	3.1
1987-1989 (1988)	160	178	15.4	17.3	9.0	5.3	1.9	3.3
1986-1988 (1987)	162	185	16.0	18.2	8.6	5.3	2.1	3.4
1985-1987 (1986)	184	213	16.4	18.8	9.0	5.6	2.1	3.4
1984-1986 (1985)	151	174	16.4	18.5	8.3	5.4	2.2	3.4
1983-1985 (1984)	146	156	16.8	18.9	8.4	5.5	2.3	3.4
1982-1984 (1983)	172	198	17.3	19.4	8.6	5.6	2.3	3.5
1981-1983 (1982)	146	166	19.0	21.4	9.7	6.3	2.2	3.4
1980-1982 (1981)	166	178	20.1	22.4	10.4	6.6	2.2	3.4
1979-1981 (1980)	174	198	22.2	24.6	10.8	6.9	2.3	3.6
1978-1980 (1979)	165	182	22.5	25.1	10.4	6.5	2.4	3.9
1977-1979 (1978)	158	173	21.9	24.2	9.6	6.0	2.5	4.0
1976-1978 (1977)	140	155	22.3	24.4	9.6	5.9	2.5	4.1
1975-1977 (1976)	144	155	21.4	23.1	9.5	5.5	2.4	4.2
1974-1976 (1975)	115	123	22.8	24.5	10.5	6.1	2.3	4.0
1973-1975 (1974)	136	148	23.8	25.4	10.8	6.0	2.4	4.2
1972-1974 (1973)	139	147	24.3	26.3	10.5	5.7	2.5	4.6
(1972)	93	103						
1954-1956 (1955)	77		23.8		4.8	2.4		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.24

### Homicide Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific homicide death rate (1996-1998) for AI/AN males was higher for all age groups except 75 to 84 years (there were no homicide deaths for either sex for this age group) in comparison with AI/AN females. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

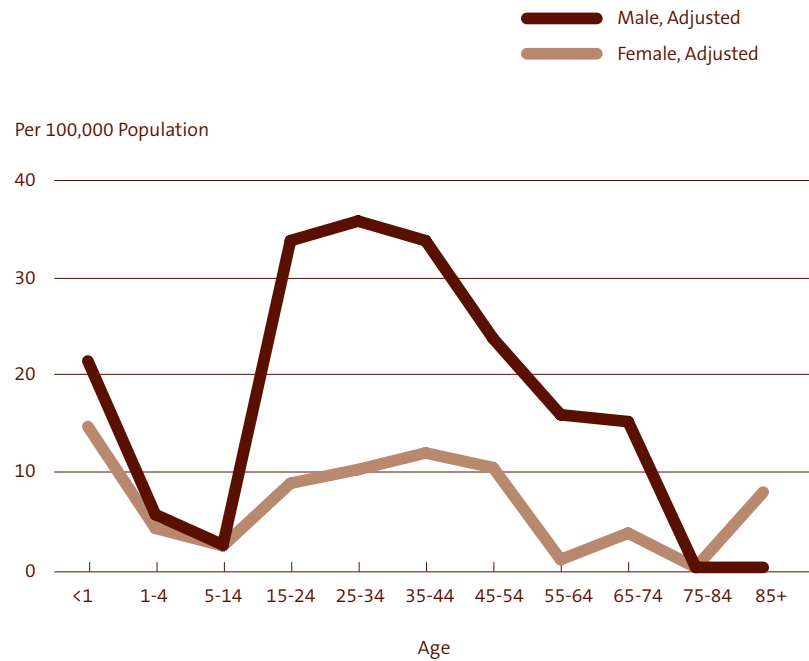


Table 4.24

## Homicide Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	13.3	17.8	14.1	21.1	12.6	14.4
1-4 years	4.2	4.7	5.4	5.4	3.0	4.0
5-14 years	1.8	2.3	1.7	2.3	2.0	2.2
15-24 years	17.8	21.3	29.6	33.4	5.6	8.6
25-34 years	18.7	22.4	30.6	35.4	7.3	10.0
35-44 years	20.0	22.2	30.3	33.4	10.3	11.7
45-54 years	15.6	16.5	22.1	23.4	9.6	10.2
55-64 years	7.7	7.7	15.6	15.6	0.8	0.8
65-74 years	7.9	8.6	13.4	14.9	3.5	3.5
75-84 years	—*	—*	—*	—*	—*	—*
85 years +	4.9	4.9	—*	—*	7.7	7.7

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	8.3	9.4	7.3	6.3	7.8	4.6
1-4 years	2.4	2.7	2.2	1.7	1.9	1.6
5-14 years	1.2	1.5	0.9	0.8	1.0	0.6
15-24 years	16.8	28.2	4.7	8.3	13.2	3.2
25-34 years	12.8	20.5	5.1	7.4	11.4	3.4
35-44 years	8.4	12.5	4.3	5.4	7.8	2.9
45-54 years	5.6	8.5	2.7	4.0	5.9	2.1
55-64 years	3.9	6.1	2.0	3.0	4.6	1.6
65-74 years	2.9	4.3	1.9	2.4	3.3	1.7
75-84 years	2.9	3.8	2.2	2.4	3.1	2.0
85 years +	3.8	5.9	3.0	3.4	5.2	2.7

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.25

## Age-Adjusted Firearm Injury Death Rates

The age-adjusted AI/AN firearm injury death rate has decreased from a rate of 27.5 for the three-year period 1978-1980 to 17.6 in 1996-1998. This is a 36 percent decrease in injury deaths. The rate (17.6 deaths per 100,000 population) for the three-year period of 1996-1998 is 44 percent greater than the U.S. all-races rate of 12.2 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

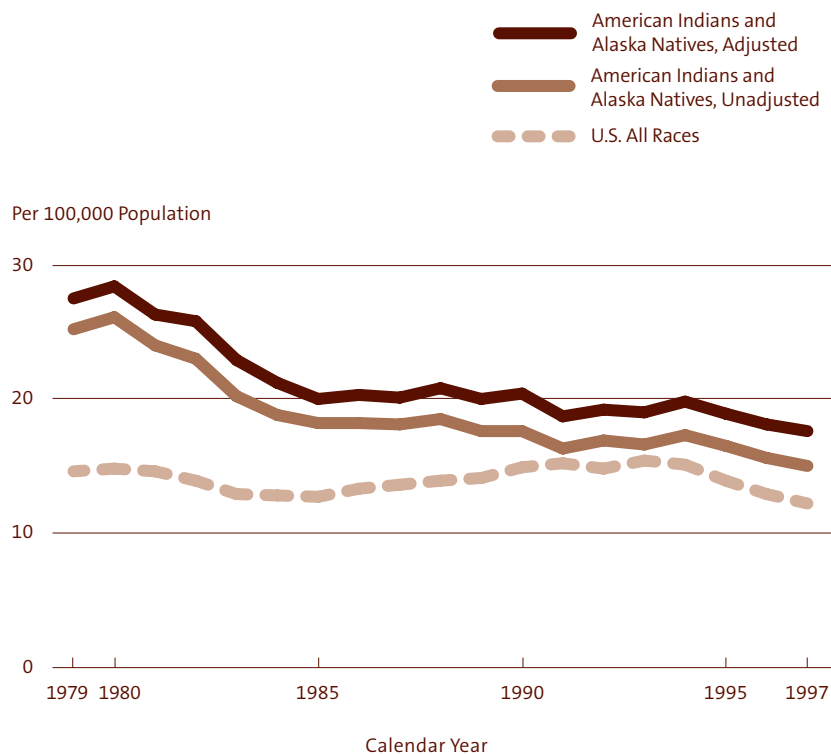


Table 4.25

Firearm Injury<sup>1</sup> Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1979-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>2</sup> to:	
	Number Unadjusted	Number Adjusted <sup>2</sup>	Rate Unadjusted	Rate Adjusted <sup>2</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	213	251						
1996-1998 (1997)	202	244	15.0	17.6	12.2	10.0	1.4	1.8
1995-1997 (1996)	188	214	15.6	18.1	12.9	10.5	1.4	1.7
1994-1996 (1995)	227	261	16.5	18.9	13.9	11.3	1.4	1.7
1993-1995 (1994)	230	264	17.3	19.8	15.1	11.9	1.3	1.7
1992-1994 (1993)	204	232	16.6	19.0	15.4	12.5	1.2	1.5
1991-1993 (1992)	181	204	16.9	19.2	14.8	12.3	1.3	1.6
1990-1992 (1991)	221	253	16.3	18.7	15.2	12.5	1.2	1.5
1989-1991 (1990)	172	200	17.6	20.4	14.9	12.6	1.4	1.6
1988-1990 (1989)	215	252	17.6	20.0	14.1	12.1	1.4	1.7
1987-1989 (1988)	205	227	18.5	20.8	13.9	12.1	1.5	1.7
1986-1988 (1987)	182	203	18.1	20.1	13.6	12.1	1.5	1.7
1985-1987 (1986)	186	206	18.2	20.3	13.3	11.7	1.5	1.7
1984-1986 (1985)	186	208	18.2	20.0	12.7	11.4	1.6	1.8
1983-1985 (1984)	169	183	18.8	21.2	12.8	11.6	1.7	1.8
1982-1984 (1983)	185	216	20.2	22.9	12.9	11.5	1.8	2.0
1981-1983 (1982)	210	232	23.0	25.8	13.9	12.2	1.9	2.1
1980-1982 (1981)	210	226	24.0	26.3	14.6	12.5	1.8	2.1
1979-1981 (1980)	195	211	26.1	28.4	14.8	12.4	1.9	2.3
1978-1980 (1979)	229	250	25.2	27.5	14.6	12.2	1.9	2.3
(1978)	176	189						

<sup>1</sup> Includes deaths with ICD-9 codes: Unintentional injury caused by firearm missile—E922; suicide and self-inflicted injury by firearms—E955.0-E955.4; assault by firearms and legal intervention—E965.0-E965.4, E970; and injury by firearms, undetermined whether unintentionally or purposely inflicted—E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms. Includes ICD-8 codes; E922, E955, E965, E970 and E985 (1978 only).

<sup>2</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Firearm death data are introduced in 1978 for the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

SOURCE: National Vital Statistics Reports. Deaths: Final Data for 1997, June 30, 1999. NCHS, DHHS, Report Vol. 47, No. 19, Table 18. Data not published for the U.S. populations prior to 1979.

Chart 4.26

### Firearm Injury Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific firearm injury death rate (1996-1998) for AI/AN males are higher for all age groups except under 1 year (there were no homicide deaths for either sex for this age group) in comparison with AI/AN females. The AI/AN male rate peaked at 58.3 deaths per 100,000 population for the 15 to 24 year age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

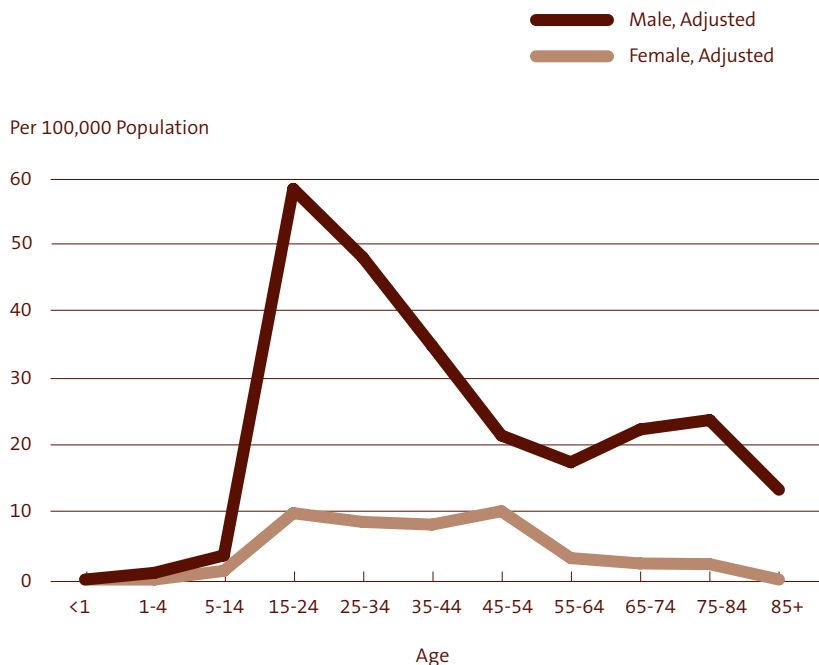


Table 4.26

Firearm Injury<sup>1</sup> Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>2</sup>	Unadjusted	Adjusted <sup>2</sup>	Unadjusted	Adjusted <sup>2</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	0.5	0.5	1.0	1.0	—*	—*
5-14 years	2.3	2.5	3.2	3.6	1.3	1.3
15-24 years	28.7	34.6	49.6	58.3	7.0	9.9
25-34 years	22.8	27.9	41.0	48.1	5.4	8.6
35-44 years	19.3	21.1	32.2	34.9	7.1	8.2
45-54 years	13.2	15.6	19.7	21.5	7.3	10.2
55-64 years	9.4	9.8	16.6	17.5	3.2	3.2
65-74 years	9.9	11.2	19.4	22.4	2.4	2.4
75-84 years	9.6	10.9	20.4	23.8	2.3	2.3
85 years +	4.9	4.9	13.4	13.4	—*	—*

U.S. All Races				U.S. White		
Age Group	Both Sexes		Female	Both Sexes		Female
	Both Sexes	Male		Both Sexes	Male	
Under 1 year	0.2	0.1	0.3	0.1	0.1	0.1
1-4 years	0.5	0.5	0.5	0.4	0.4	0.4
5-14 years	1.4	2.1	0.7	1.2	1.8	0.5
15-24 years	22.3	38.9	4.8	14.7	24.8	3.8
25-34 years	17.8	30.5	5.1	13.9	23.1	4.5
35-44 years	13.2	21.5	4.9	12.3	19.5	4.9
45-54 years	11.5	19.3	4.1	11.5	19.0	4.2
55-64 years	11.0	19.7	3.0	11.3	20.1	3.1
65-74 years	11.9	23.1	2.9	12.4	23.9	2.9
75-84 years	14.9	34.1	2.3	15.8	36.1	2.4
85 years +	14.3	45.8	1.7	15.2	49.3	1.7

—\* Represents zero.

<sup>1</sup> Includes deaths with ICD-9 codes: unintentional injury caused by firearm missile—E922; suicide and self-inflicted injury by firearms—E955.0-E955.4; assault by firearms and legal intervention—E965.0-E965.4, E970, and injury by firearms, undetermined whether unintentionally or purposely inflicted—E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms.

<sup>2</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.27

## Age-Adjusted Other Injury Death Rates

The age-adjusted death rate due to other injuries (undetermined injury and war injury) has decreased 70 percent since 1972-1974 from 8.8 to 2.7. The 1996-1998 rate (2.7 deaths per 100,000 population) is more than twice the U.S. all-races rate of 1.3 for 1997. These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on state death certificates.

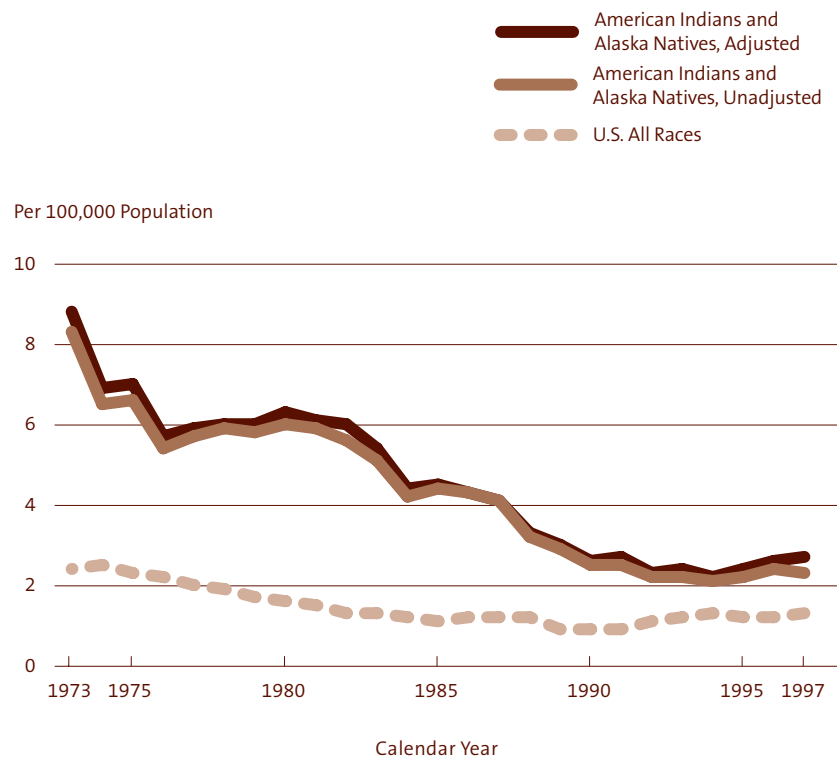


Table 4.27

Other Injury<sup>1,2</sup> Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1973-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>4</sup> to:	
	Number Unadjusted	Number Adjusted <sup>4</sup>	Rate Unadjusted	Rate Adjusted <sup>4</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	30	36						
1996-1998 (1997)	31	34	2.3	2.7	1.3	1.2	2.1	2.3
1995-1997 (1996)	29	34	2.4	2.6	1.2	1.2	2.2	2.2
1994-1996 (1995)	30	31	2.2	2.4	1.2	1.1	2.0	2.2
1993-1995 (1994)	24	28	2.1	2.2	1.3	1.2	1.7	1.8
1992-1994 (1993)	24	25	2.2	2.4	1.2	1.1	2.0	2.2
1991-1993 (1992)	31	34	2.2	2.3	1.1	1.0	2.1	2.3
1990-1992 (1991)	26	27	2.5	2.7	0.9	0.8	3.0	3.4
1989-1991 (1990)	31	33	2.5	2.6	0.9	0.8	2.9	3.3
1988-1990 (1989)	28	29	2.9	3.0	0.9	0.8	3.3	3.8
1987-1989 (1988)	34	35	3.2	3.3	1.2	1.0	2.8	3.3
1986-1988 (1987)	41	42	4.1	4.1	1.2	1.0	3.4	4.1
1985-1987 (1986)	50	50	4.3	4.3	1.2	1.1	3.6	3.9
1984-1986 (1985)	39	39	4.4	4.5	1.1	1.0	4.1	4.5
1983-1985 (1984)	39	41	4.2	4.4	1.2	1.1	3.7	4.0
1982-1984 (1983)	40	42	5.1	5.4	1.3	1.1	3.9	4.9
1981-1983 (1982)	52	54	5.6	6.0	1.3	1.2	4.6	5.0
1980-1982 (1981)	46	49	5.9	6.1	1.5	1.3	4.1	4.7
1979-1981 (1980)	39	39	6.0	6.3	1.6	1.4	3.9	4.5
1978-1980 (1979)	49	52	5.8	6.0	1.7	1.5	3.5	4.0
1977-1979 (1978)	37	38	5.9	6.0	1.9	1.6	3.2	3.8
1976-1978 (1977)	38	38	5.7	5.9	2.0	1.6	3.0	3.7
1975-1977 (1976)	39	43	5.4	5.7	2.2	1.8	2.6	3.2
1974-1976 (1975)	29	31	6.6	7.0	2.3	1.9	3.0	3.7
1973-1975 (1974)	50	53	6.5	6.9	2.5	2.1	2.8	3.3
1972-1974 (1973)	35 <sup>3</sup>	37	8.3	8.8	2.4	2.0	3.7	4.4
(1972)	46	48						

<sup>1</sup> Includes deaths with ICD-9 codes E980-E989; injury undetermined whether unintentionally or purposely inflicted.

<sup>2</sup> Includes deaths with ICD-9 codes E990-E999; injury resulting from operations of war.

<sup>3</sup> In 1973 there was one AI/AN injury death resulting from operations of war. For each of the other years shown above there were no AI/AN injury deaths due to this cause.

<sup>4</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Starting in 1972 data are first available and are shown above for the specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.28

### Other Injury Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific death rate due to other injuries (1996-1998) for AI/AN males was higher for all age groups from 5 to 84 years in comparison with AI/AN females (for 85 years and older, there were no other injury deaths). Female age-specific death rates due to other injuries (1996-1998) were higher for ages 1 to 4 in comparison with AI/AN males. The highest age-specific and sex-specific rates occurred for males in age group 35 to 44 (9.1 deaths per 100,000 population). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

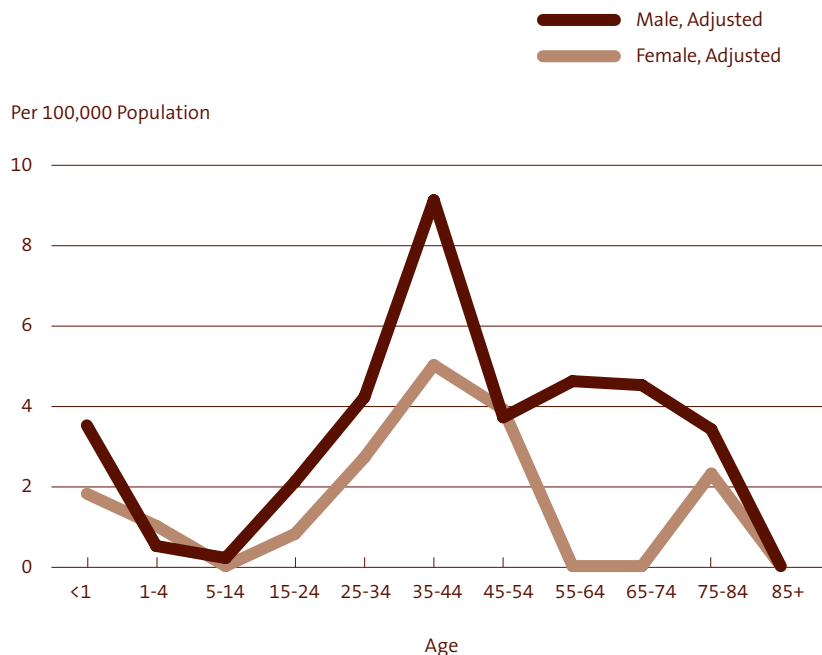


Table 4.28

## Other Injury Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	2.7	2.7	3.5	3.5	1.8	1.8
1-4 years	0.5	0.7	0.5	0.5	0.5	1.0
5-14 years	0.1	0.1	0.2	0.2	—*	—*
15-24 years	1.3	1.4	1.8	2.1	0.8	0.8
25-34 years	2.8	3.4	3.4	4.2	2.2	2.7
35-44 years	5.9	7.0	8.3	9.1	3.6	5.0
45-54 years	3.5	3.8	3.7	3.7	3.4	3.9
55-64 years	2.1	2.1	4.6	4.6	—*	—*
65-74 years	2.0	2.0	4.5	4.5	—*	—*
75-84 years	2.7	2.7	3.4	3.4	2.3	2.3
85 years +	—*	—*	—*	—*	—*	—*

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	1.5	1.9	1.1	1.3	1.6	0.9
1-4 years	0.3	0.2	0.3	0.2	0.2	0.2
5-14 years	0.1	0.2	0.1	0.1	0.2	0.1
15-24 years	1.0	1.6	0.4	0.9	1.4	0.4
25-34 years	1.8	2.7	0.9	1.7	2.5	0.9
35-44 years	3.0	4.4	1.5	2.8	4.1	1.4
45-54 years	1.9	2.8	1.0	1.8	2.6	1.0
55-64 years	1.0	1.4	0.7	0.9	1.2	0.7
65-74 years	0.7	1.0	0.5	0.7	0.9	0.5
75-84 years	0.8	1.2	0.5	0.7	1.1	0.5
85 years +	1.4	2.2	1.1	1.4	2.3	1.0

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.29

## Age-Adjusted Alcohol-Related Death Rates

The age-adjusted alcohol-related death rate for AI/AN decreased 49 percent (from 71.5 to 36.4) between 1979-1981 and 1985-1987. Since then, alcohol-related death rates have increased 28 percent. The 1996-1998 rate (46.5 deaths per 100,000 population) is over 7 times the U.S. all-races rate of 6.3 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

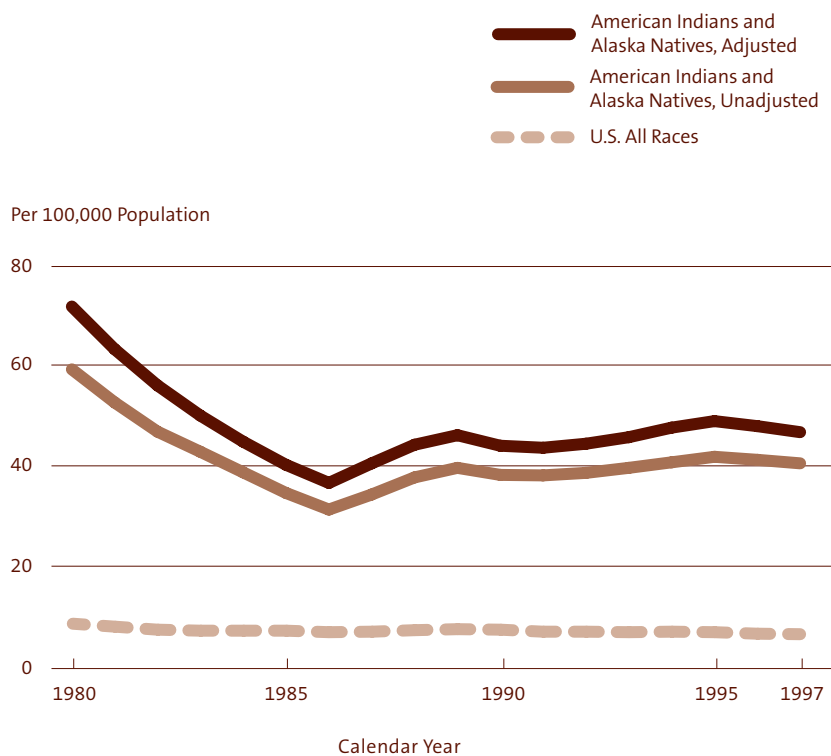


Table 4.29

## Alcohol-Related Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1980-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	465	536						
1996-1998 (1997)	435	500	40.3	46.5	6.3	6.0	7.4	7.8
1995-1997 (1996)	456	527	41.0	47.7	6.4	6.0	7.5	8.0
1994-1996 (1995)	460	543	41.6	48.7	6.7	6.2	7.3	7.9
1993-1995 (1994)	427	494	40.5	47.4	6.8	6.2	7.0	7.6
1992-1994 (1993)	395	458	39.4	45.5	6.7	6.1	6.8	7.5
1991-1993 (1992)	402	458	38.4	44.2	6.8	6.1	6.5	7.2
1990-1992 (1991)	367	417	37.9	43.4	6.8	6.0	6.4	7.2
1989-1991 (1990)	350	403	38.0	43.8	7.2	6.2	6.1	7.1
1988-1990 (1989)	376	436	39.4	45.9	7.3	6.2	6.3	7.4
1987-1989 (1988)	375	441	37.5	44.0	7.1	5.9	6.2	7.5
1986-1988 (1987)	264	310	34.1	40.3	6.8	5.8	5.9	6.8
1985-1987 (1986)	264	310	31.1	36.4	6.7	5.7	5.4	6.6
1984-1986 (1985)	274	315	34.4	40.0	7.0	5.8	5.7	6.8
1983-1985 (1984)	302	348	38.5	44.6	7.0	5.9	6.4	6.9
1982-1984 (1983)	295	345	42.6	49.8	7.0	6.0	7.1	7.0
1981-1983 (1982)	293	343	46.6	55.8	7.2	6.2	7.8	7.4
1980-1982 (1981)	344	424	52.4	63.0	7.8	6.6	8.1	8.0
1979-1981 (1980)	369	436	59.0	71.5	8.4	6.9	8.5	8.3
(1979)	377	454						

<sup>1</sup> Adjusted - specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: For all years presented above, the causes of death that define alcohol-related deaths have been expanded to include alcoholic polyneuropathy—357.5 and the entire code group for unintentional poisoning by alcohol—E860, as defined by the National Center for Health Statistics, DHHS, for all years in which ICD-9 codes are employed (1979 to the present). For a complete description of the causes of death that defines deaths due to alcohol-related causes, refer to the Glossary of ICD-9 Codes. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.30

### Alcohol-Related Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

Drinking has taken a great toll on AI/AN males compared to AI/AN females as evidenced by alcohol-related death rates. The age-specific alcohol-related death rate (1996-1998) for AI/AN males was higher for all age groups in comparison with AI/AN females. However, the AI/AN female rate is much higher than the rate of females in the U.S. all-races and white populations. The U.S. female rate never reached 10.0 for any age group in 1997, whereas the AI/AN female rate for years 1996-1998 ranged from 23.4 to 97.6 for age groups 25 through 84 years. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

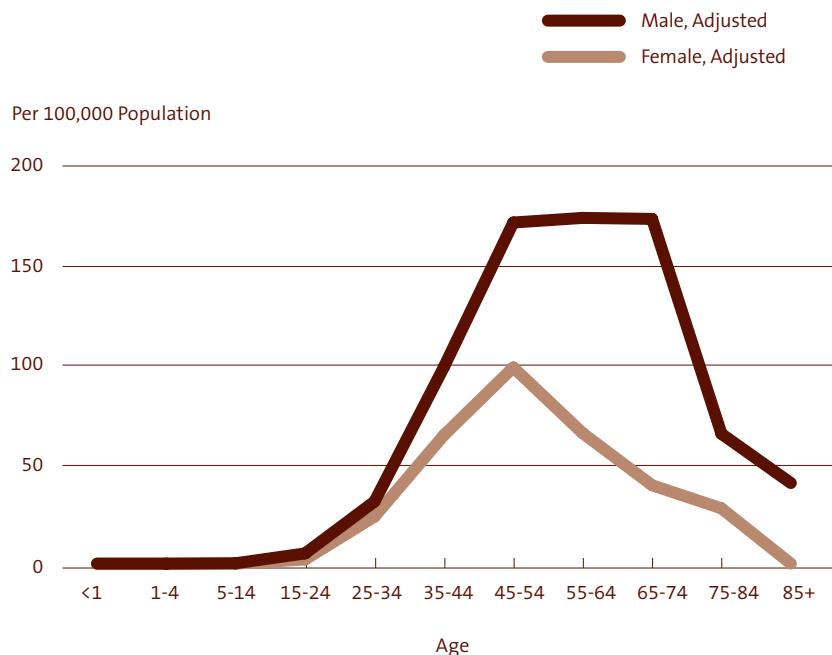


Table 4.30

## Alcohol-Related Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.1	0.1	0.2	0.2	—*	—*
15-24 years	3.3	3.7	5.1	5.1	1.3	2.1
25-34 years	23.5	27.1	29.2	30.9	18.1	23.4
35-44 years	69.5	80.3	86.8	97.8	53.3	63.9
45-54 years	113.5	132.1	148.1	169.7	81.8	97.6
55-64 years	99.3	114.8	148.1	172.0	56.9	64.9
65-74 years	85.8	97.6	149.2	171.5	35.5	39.0
75-84 years	39.7	42.4	61.2	64.6	25.2	27.5
85 years +	14.7	14.7	40.1	40.1	—*	—*

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.1	0.0	—*	0.1
1-4 years	0.0	—*	0.0	0.0	—*	0.0
5-14 years	0.0	0.0	0.0	0.0	0.0	0.0
15-24 years	0.3	0.4	0.1	0.3	0.4	0.1
25-34 years	2.0	2.8	1.2	1.9	2.7	1.0
35-44 years	8.9	13.0	4.9	8.6	12.7	4.5
45-54 years	16.9	26.9	7.3	15.7	25.0	6.6
55-64 years	20.3	32.8	9.0	19.1	30.4	8.6
65-74 years	17.7	30.0	7.9	17.3	28.8	7.9
75-84 years	10.3	18.6	4.8	10.2	18.3	4.8
85 years +	4.8	11.4	2.2	4.8	11.5	2.2

—\* Represents zero.

0.0 Quantity more than zero but less than 0.05.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.31

Age-Adjusted Chronic Liver Disease and Cirrhosis Death Rates

The age-adjusted chronic liver disease and cirrhosis death rate for AI/AN has decreased 45 percent (from 66.2 to 36.4) since 1972-1974. The 1996-1998 rate of (36.4 deaths per 100,000 population) is 4.9 times higher than the U.S. all-races population rate of 7.4 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

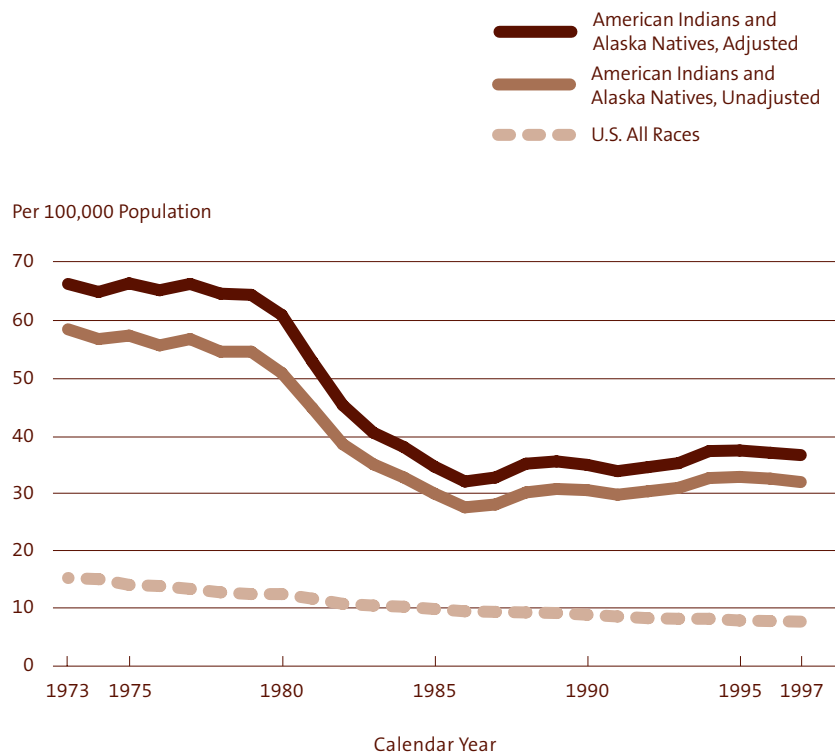


Table 4.31

## Chronic Liver Disease and Cirrhosis Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	375	433						
1996-1998 (1997)	339	390	31.7	36.4	7.4	7.3	4.9	5.0
1995-1997 (1996)	339	386	32.3	36.8	7.5	7.3	4.9	5.0
1994-1996 (1995)	372	420	32.6	37.2	7.6	7.4	4.9	5.0
1993-1995 (1994)	329	377	32.4	37.1	7.9	7.5	4.7	4.9
1992-1994 (1993)	312	358	30.7	35.0	7.9	7.6	4.4	4.6
1991-1993 (1992)	299	336	30.1	34.3	8.0	7.7	4.3	4.5
1990-1992 (1991)	288	326	29.5	33.6	8.3	7.8	4.0	4.3
1989-1991 (1990)	267	307	30.3	34.7	8.6	8.0	4.0	4.3
1988-1990 (1989)	299	344	30.5	35.3	8.9	8.3	4.0	4.3
1987-1989 (1988)	267	314	29.9	34.9	9.0	8.4	3.9	4.2
1986-1988 (1987)	224	264	27.8	32.5	9.1	8.4	3.6	3.9
1985-1987 (1986)	224	256	27.3	31.8	9.2	8.6	3.5	3.7
1984-1986 (1985)	237	276	29.7	34.4	9.6	8.9	3.6	3.9
1983-1985 (1984)	243	279	32.5	37.8	10.0	9.3	3.8	4.1
1982-1984 (1983)	236	273	34.8	40.3	10.2	9.5	4.0	4.2
1981-1983 (1982)	230	267	38.3	45.1	10.5	9.8	4.3	4.6
1980-1982 (1981)	284	341	44.6	52.7	11.4	10.5	4.6	5.0
1979-1981 (1980)	324	380	50.7	60.8	12.2	11.0	5.0	5.5
1978-1980 (1979)	305	373	54.4	64.3	12.2	11.1	5.3	5.8
1977-1979 (1978)	308	352	54.4	64.5	12.5	11.3	5.2	5.7
1976-1978 (1977)	281	332	56.6	66.2	13.1	11.8	5.1	5.6
1975-1977 (1976)	296	347	55.5	65.1	13.6	12.3	4.8	5.3
1974-1976 (1975)	249	287	57.2	66.3	13.8	12.6	4.8	5.3
1973-1975 (1974)	257	293	56.6	64.8	14.8	13.4	4.4	4.8
1972-1974 (1973)	238	268	58.3	66.2	15.0	13.7	4.4	4.8
(1972)	222	249						
1954-1956 (1955)			26.9		9.4	9.4		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.32

### Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

Other than for age groups under 15 years, the age-specific chronic liver disease and cirrhosis death rate (1996-1998) for AI/AN males was higher for all age groups in comparison with AI/AN females. The AI/AN male rate exceeded 124.8 deaths per 100,000 population for age groups 45 to 64 years. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

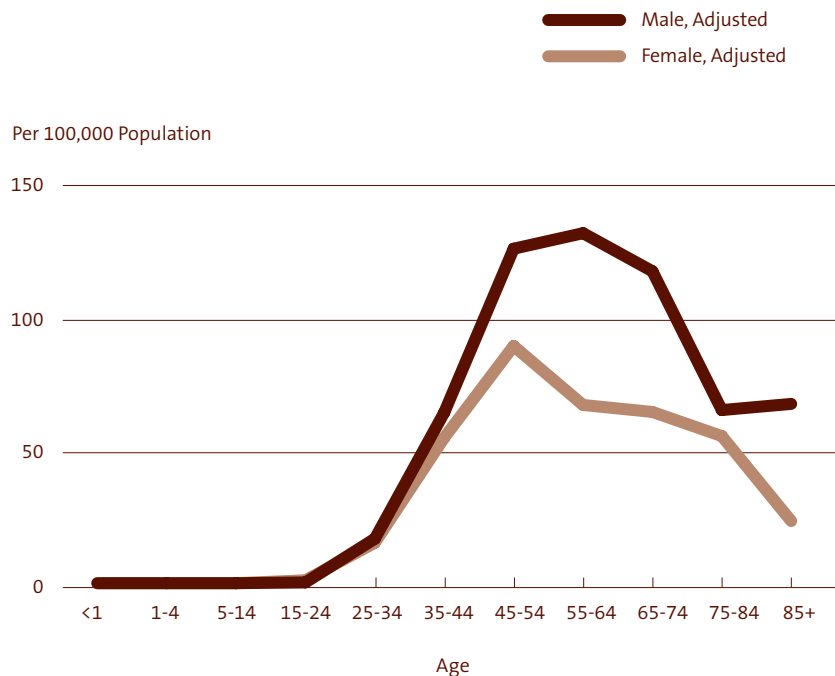


Table 4.32

## Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	0.4	0.7	0.3	0.3	0.5	1.1
25-34 years	13.3	15.8	15.5	16.6	11.3	15.1
35-44 years	50.8	58.9	56.1	63.7	45.8	54.3
45-54 years	90.9	105.9	109.4	124.8	73.9	88.5
55-64 years	83.9	96.3	113.2	130.6	58.5	66.5
65-74 years	80.5	87.1	105.9	116.4	60.3	63.9
75-84 years	56.1	58.8	61.2	64.6	52.6	54.9
85 years +	39.2	39.2	66.9	66.9	23.2	23.2

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.6	—*	—*	—*	—*	—*
1-4 years	0.0	—*	—*	—*	—*	—*
5-14 years	0.0	—*	—*	—*	—*	—*
15-24 years	0.1	—*	—*	—*	—*	—*
25-34 years	1.3	1.7	0.9	1.3	1.7	0.8
35-44 years	8.0	11.3	4.7	7.9	11.3	4.4
45-54 years	16.7	25.5	8.3	15.9	24.4	7.6
55-64 years	24.1	35.2	14.0	23.6	34.2	13.7
65-74 years	31.4	41.7	23.0	32.1	42.4	23.5
75-84 years	30.2	38.7	24.7	31.4	40.2	25.6
85 years +	22.8	30.7	19.7	24.0	32.2	20.7

—\* Represents zero. 0.0 Quantity more than zero but less than 0.05.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.33

## Age-Adjusted Malignant Neoplasm Death Rates

The age-adjusted malignant neoplasm death rate for AI/AN hit a low in 1977-1979 of 91.2 deaths per 100,000 population, but since has increased 36 percent to a rate of 124.0 in 1996-1998. The AI/AN rate is lower than the U.S. all-races rate, but the gap between the two rates has been decreasing. The 1996-1998 AI/AN rate (124.0 deaths per 100,000 population) is barely 2 percentage points less than the U.S. all-races rate of 125.6 for 1997. These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on state death certificates.

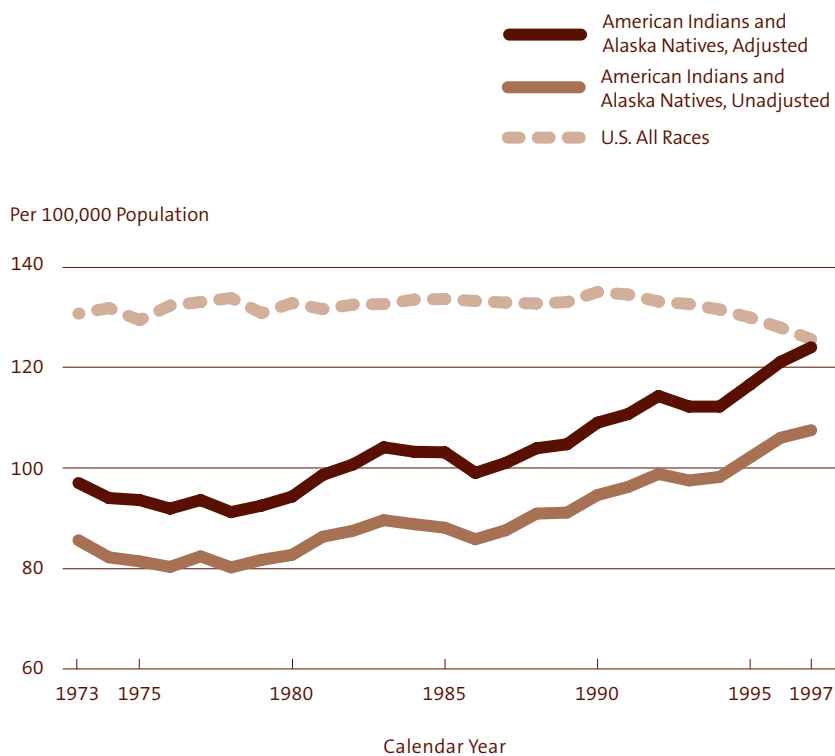


Table 4.33

## Malignant Neoplasm Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number		Rate		Rate	Rate	U.S. All Races	U.S. White
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>				
(1998)	1,255	1,451						
1996-1998 (1997)	1,256	1,439	107.5	124.0	125.6	122.9	1.0	1.0
1995-1997 (1996)	1,226	1,400	106.0	121.1	127.9	125.2	0.9	1.0
1994-1996 (1995)	1,141	1,278	102.1	116.6	129.9	127.0	0.9	0.9
1993-1995 (1994)	1,046	1,201	98.2	112.2	131.5	128.6	0.9	0.9
1992-1994 (1993)	1,025	1,169	97.5	112.2	132.6	129.4	0.8	0.9
1991-1993 (1992)	1,026	1,174	98.8	114.3	133.1	129.9	0.9	0.9
1990-1992 (1991)	1,021	1,175	96.2	110.7	134.5	131.3	0.8	0.8
1989-1991 (1990)	859	969	94.6	109.0	135.0	131.5	0.8	0.8
1988-1990 (1989)	913	1,049	91.1	104.7	133.0	130.2	0.8	0.8
1987-1989 (1988)	831	954	90.9	103.9	132.7	130.0	0.8	0.8
1986-1988 (1987)	768	863	87.6	101.0	132.9	130.1	0.8	0.8
1985-1987 (1986)	756	881	85.8	99.0	133.2	130.4	0.7	0.8
1984-1986 (1985)	714	820	88.1	103.1	133.6	130.7	0.8	0.8
1983-1985 (1984)	713	836	88.8	103.2	133.5	130.2	0.8	0.8
1982-1984 (1983)	662	757	89.6	104.1	132.6	129.4	0.8	0.8
1981-1983 (1982)	617	706	87.5	100.7	132.5	129.4	0.8	0.8
1980-1982 (1981)	578	661	86.3	98.6	131.6	128.5	0.7	0.8
1979-1981 (1980)	567	635	82.7	94.3	132.8	129.6	0.7	0.7
1978-1980 (1979)	480	546	81.7	92.5	130.8	130.2	0.7	0.7
1977-1979 (1978)	503	567	80.2	91.2	133.8	130.8	0.7	0.7
1976-1978 (1977)	456	515	82.4	93.6	133.0	130.0	0.7	0.7
1975-1977 (1976)	441	503	80.3	91.9	132.3	129.5	0.7	0.7
1974-1976 (1975)	395	456	81.4	93.6	129.4	128.1	0.7	0.7
1973-1975 (1974)	403	461	82.2	94.0	131.8	129.0	0.7	0.7
1972-1974 (1973)	385	433	85.6	97.0	130.7	127.7	0.7	0.8
(1972)	354	400						
1954-1956 (1955)	296		95.0		125.8	125.8		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.34

### Malignant Neoplasm Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific malignant neoplasm death rate (1996-1998) for AI/AN males was 59 percent greater than AI/AN females in age groups over 64 years. However, for the age group 35 to 44 years, the female rate was almost 2.0 times the male rate. The rate for AI/AN females increased with age, but the onset of a rate increase for AI/AN males begins with age 15. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

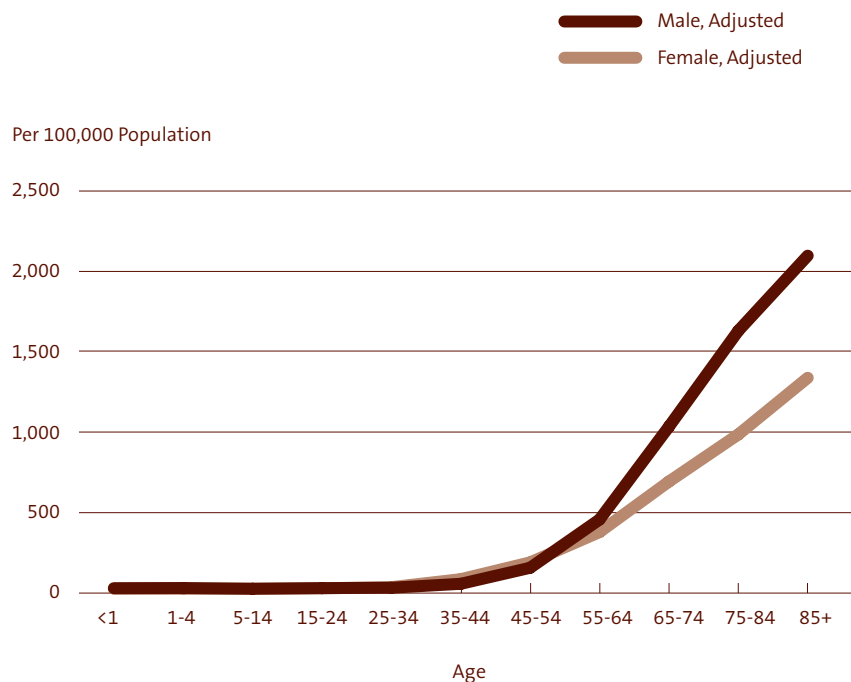


Table 4.34

## Malignant Neoplasm Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	2.7	3.6	5.3	5.3	—*	1.8
1-4 years	3.7	4.2	5.4	6.3	2.0	2.0
5-14 years	1.4	2.0	1.5	1.9	1.3	2.0
15-24 years	4.1	5.1	4.6	5.7	3.5	4.6
25-34 years	8.4	10.0	7.3	8.2	9.4	11.9
35-44 years	41.8	47.5	31.5	32.6	51.5	61.4
45-54 years	130.9	149.7	119.9	132.2	141.0	165.8
55-64 years	332.3	390.5	375.3	432.4	294.8	354.1
65-74 years	706.6	819.4	869.6	1,009.9	577.3	668.4
75-84 years	1,064.6	1,220.6	1,371.2	1,606.0	858.3	961.3
85 years +	1,547.6	1,591.7	1,966.0	2,073.0	1,305.8	1,313.6

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	2.4	2.3	2.5	2.3	2.1	2.4
1-4 years	2.9	3.1	2.6	2.8	3.0	2.6
5-14 years	2.7	2.8	2.5	2.7	2.9	2.6
15-24 years	4.5	5.2	3.7	4.4	5.1	3.6
25-34 years	11.6	11.5	11.7	11.2	11.2	11.2
35-44 years	38.9	34.5	43.1	36.4	32.3	40.6
45-54 years	135.1	138.0	132.3	128.7	129.0	128.4
55-64 years	395.7	453.4	343.2	384.3	432.4	339.6
65-74 years	847.3	1,058.4	676.8	838.7	1,038.7	674.6
75-84 years	1,335.2	1,770.2	1,050.6	1,326.1	1,746.1	1,049.7
85 years +	1,805.0	2,712.5	1,439.2	1,794.4	2,695.5	1,435.8

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.35

## Age-Adjusted Lung Cancer Death Rates

The age-adjusted lung cancer (this category has been expanded to also include trachea and bronchus) death rate for AI/AN hit a low in 1973-1975 of 11.8 deaths per 100,000 population, but has increased 184 percent since then to 33.5 in 1996-1998. The AI/AN rate is lower than the U.S. all-races rate, but the gap between the two rates has been decreasing. The 1996-1998 AI/AN rate (33.5 deaths per 100,000 population) is only 10 percent less than the All Races rate of 37.4 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

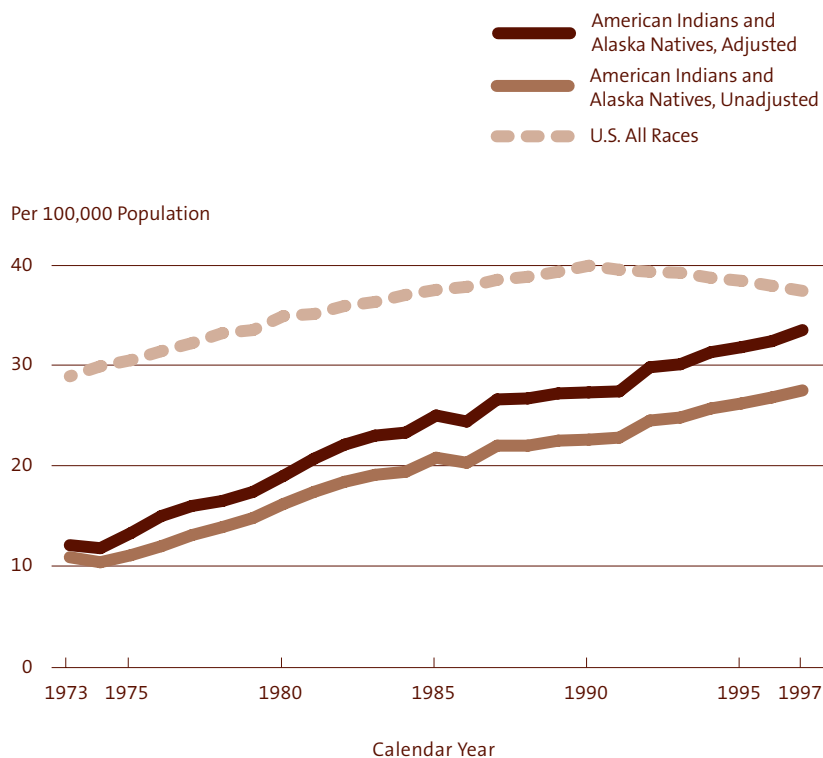


Table 4.35

Lung Cancer<sup>1</sup> Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1973-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>2</sup> to:	
	Number Unadjusted	Number Adjusted <sup>2</sup>	Rate Unadjusted	Rate Adjusted <sup>2</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	325	399						
1996-1998 (1997)	305	370	27.5	33.5	37.4	37.2	0.9	0.9
1995-1997 (1996)	290	351	26.8	32.4	37.9	37.7	0.9	0.9
1994-1996 (1995)	286	342	26.2	31.8	38.4	38.0	0.8	0.8
1993-1995 (1994)	264	321	25.7	31.3	38.7	38.4	0.8	0.8
1992-1994 (1993)	260	316	24.8	30.1	39.2	38.8	0.8	0.8
1991-1993 (1992)	233	278	24.5	29.8	39.3	38.8	0.8	0.8
1990-1992 (1991)	235	284	22.8	27.4	39.5	39.0	0.7	0.7
1989-1991 (1990)	188	220	22.6	27.3	39.9	39.3	0.7	0.7
1988-1990 (1989)	207	251	22.5	27.2	39.3	38.6	0.7	0.7
1987-1989 (1988)	209	253	22.0	26.7	38.8	38.3	0.7	0.7
1986-1988 (1987)	152	181	22.0	26.6	38.5	37.8	0.7	0.7
1985-1987 (1986)	194	235	20.3	24.4	37.8	37.2	0.6	0.7
1984-1986 (1985)	155	184	20.8	25.0	37.5	36.8	0.7	0.7
1983-1985 (1984)	146	173	19.4	23.3	37.0	36.4	0.6	0.6
1982-1984 (1983)	134	165	19.1	23.0	36.3	35.7	0.6	0.6
1981-1983 (1982)	124	147	18.4	22.1	35.9	35.2	0.6	0.6
1980-1982 (1981)	113	134	17.4	20.7	35.1	34.4	0.6	0.6
1979-1981 (1980)	103	120	16.2	19.0	34.9	34.2	0.5	0.6
1978-1980 (1979)	89	101	14.8	17.4	33.5	32.9	0.5	0.5
1977-1979 (1978)	79	85	13.9	16.5	33.2	32.6	0.5	0.5
1976-1978 (1977)	73	88	13.1	16.0	32.2	31.5	0.5	0.5
1975-1977 (1976)	63	83	12.0	15.0	31.4	30.9	0.5	0.5
1974-1976 (1975)	47	56	11.1	13.3	30.5	29.9	0.4	0.4
1973-1975 (1974)	49	56	10.4	11.8	29.9	29.3	0.4	0.4
1972-1974 (1973)	44	48	10.9	12.1	28.9	28.4	0.4	0.4
(1972)	43	48						

<sup>1</sup> Lung cancer deaths includes deaths due to cancers of the trachea, bronchus and lung, ICD-9 codes and ICD-8 codes 162.0 to 162.9.

<sup>2</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Starting in 1972 data are first available and are shown above for the specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.36

### Lung Cancer Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific lung cancer (this category has been expanded to also include trachea and bronchus) death rate the three-year period of 1996-1998 for AI/AN males and females was fairly similar for age groups 1 to 44 years. For age group 45 to 54 the rate for AI/AN males (33.2) is 73 percent greater than the AI/AN rate (19.2) for females. The rate decreased at age 85 for both AI/AN males and females. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

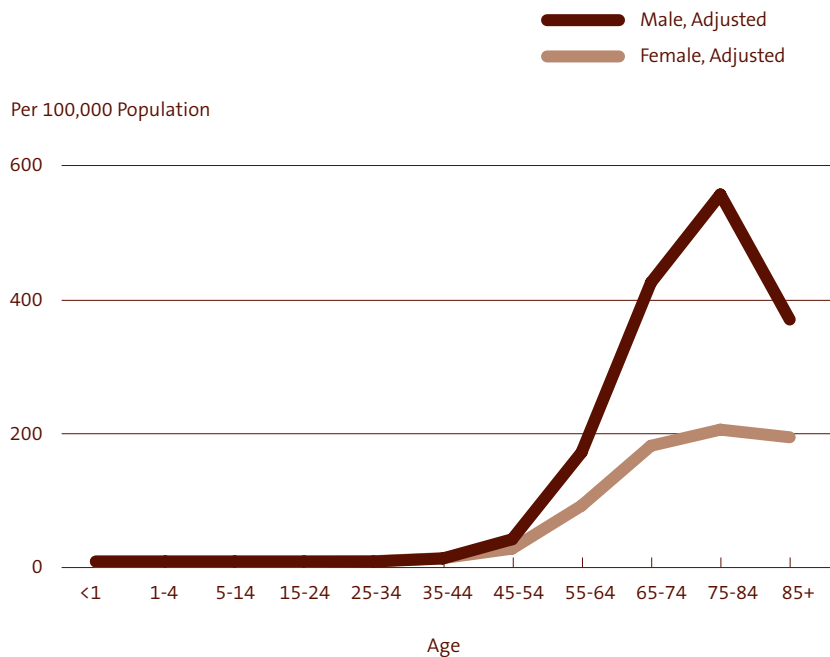


Table 4.36

Lung Cancer<sup>1</sup> Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>2</sup>	Unadjusted	Adjusted <sup>2</sup>	Unadjusted	Adjusted <sup>2</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	—*	—*	—*	—*	—*	—*
25-34 years	0.1	0.3	—*	—*	0.3	0.5
35-44 years	3.7	4.8	4.2	4.5	3.2	5.0
45-54 years	22.6	25.9	29.5	33.2	16.4	19.2
55-64 years	97.2	120.3	133.4	162.8	65.7	83.3
65-74 years	229.6	280.4	341.6	416.2	140.8	172.7
75-84 years	273.7	338.0	425.3	547.8	171.7	196.8
85 years +	230.2	249.8	307.6	361.1	185.4	185.4

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	0.0	0.1	—*	0.0	0.1	—*
1-4 years	0.0	—*	0.0	0.0	—*	0.0
5-14 years	0.0	0.0	—*	—*	—*	—*
15-24 years	0.0	0.0	0.0	0.0	0.1	0.0
25-34 years	0.6	0.6	0.5	0.6	0.6	0.5
35-44 years	6.3	7.1	5.5	5.7	6.3	5.2
45-54 years	34.7	42.8	26.9	33.2	39.7	26.8
55-64 years	134.4	173.8	98.6	133.0	167.5	100.9
65-74 years	295.9	404.3	208.3	297.7	400.6	213.3
75-84 years	368.6	543.2	254.4	371.1	540.3	259.7
85 years +	297.6	543.9	198.4	299.7	549.1	200.5

—\* Represents zero.

0.0 Quantity more than zero but less than 0.05.

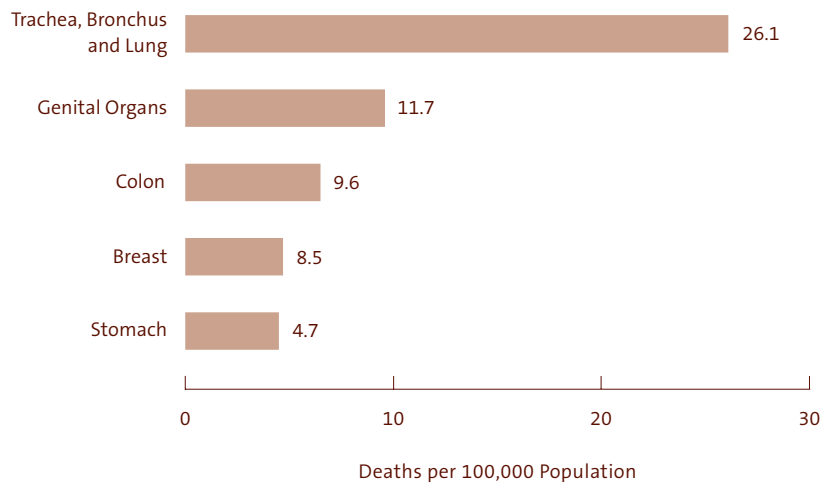
<sup>1</sup> Lung cancer deaths includes deaths due to cancers of the trachea, bronchus and lung, ICD-9 codes 162.0 to 162.9.

<sup>2</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.37

**Death Rates for Leading Cancer Sites**  
American Indians and Alaska Natives (1996-1998)

The leading site for cancer deaths among AI/AN in 1996-1998 was trachea, bronchus, and lung. Approximately 3 times as many AI/AN people died of this type of cancer than the next leading site, genital organs. The third and fourth leading sites were colon and breast, respectively. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.



**Table 4.37****Leading Sites for Cancer Deaths for Decedents of All Ages**

American Indians and Alaska Natives, IHS Service Area, 1996-1998

*(Rate per 100,000 Population)*

Site of Cancer Death	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Sites</b>	<b>3,777</b>	<b>4,336</b>	<b>87.0</b>	<b>99.9</b>
Trachea, bronchus and lung	920	1,120	21.4	26.1
Genital organs	383	430	10.4	11.7
Colon	340	411	7.9	9.6
Breast	248	282	7.4	8.5
Stomach	180	202	4.2	4.7
Pancreas	168	189	3.9	4.4
Liver	170	187	4.0	4.4
Kidney	142	153	3.3	3.6
Leukemia	132	152	3.1	3.5
Multiple myeloma	87	93	2.0	2.2
Rectum, rectosigmoid junction and anus	69	78	1.6	1.8
Esophagus	64	75	1.5	1.7
Gallbladder	61	66	1.4	1.5
Brain	58	66	1.4	1.5
Pharynx	44	46	1.0	1.1
Larynx	35	39	0.8	0.9
Bladder	33	35	0.8	0.8
Connective and other soft tissue	30	34	0.7	0.8
Melanoma of skin	20	24	0.5	0.6
Bone and articular cartilage	12	13	0.3	0.3
Hodgkin's disease	11	12	0.3	0.3
Thyroid gland	10	11	0.2	0.3
Tongue	7	8	0.2	0.2
Small intestine	7	7	0.2	0.2
Lymphosarcoma and reticulosarcoma	4	4	0.1	0.1
All other sites	542	599		

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

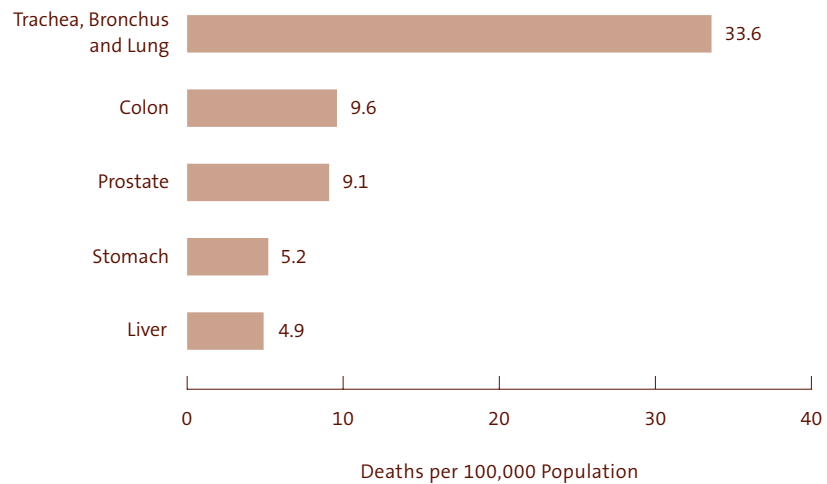
NOTE: See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths."

Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.38

**Death Rates, Leading Cancer Sites: Males**  
American Indians and Alaska Natives (1996-1998)

The leading site for cancer deaths among AI/AN males in 1996-1998 was trachea, bronchus, and lung. Almost 4 times as many AI/AN males died of this type of cancer than the next leading site, colon. Colon cancer has replaced prostate cancer as the second leading cause of cancer for AI/AN males. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.



**Table 4.38****Leading Sites for Cancer Deaths for Males**

American Indians and Alaska Natives, IHS Service Area, 1996-1998

*(Rate per 100,000 Population)*

Site of Cancer Death	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Sites</b>	<b>1,882</b>	<b>2,149</b>	<b>89.0</b>	<b>101.6</b>
Trachea, bronchus and lung	581	710	27.5	33.6
Colon	169	204	8.0	9.6
Prostate	174	192	8.2	9.1
Stomach	98	110	4.6	5.2
Liver	96	104	4.5	4.9
Kidney	89	96	4.2	4.5
Pancreas	73	81	3.5	3.8
Leukemia	65	72	3.1	3.4
Esophagus	44	52	2.1	2.5
Rectum, rectosigmoid junction and anus	41	45	1.9	2.1
Multiple myeloma	40	43	1.9	2.0
Pharynx	32	34	1.5	1.6
Brain	33	34	1.6	1.6
Larynx	28	29	1.3	1.4
Gallbladder	21	22	1.0	1.0
Bladder	19	19	0.9	0.9
Connective and other soft tissue	11	11	0.5	0.5
Melanoma of skin	9	10	0.4	0.5
Bone and articular cartilage	4	5	0.2	0.2
Thyroid gland	5	5	0.2	0.2
Tongue	4	4	0.2	0.2
Small intestine	4	4	0.2	0.2
Testis	4	4	0.2	0.2
Hodgkin's disease	4	4	0.2	0.2
Penis	2	2	0.1	0.1
Male breast	1	1	0.0	0.0
All other sites	231	252		

0.0 Quantity more than zero but less than 0.05.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

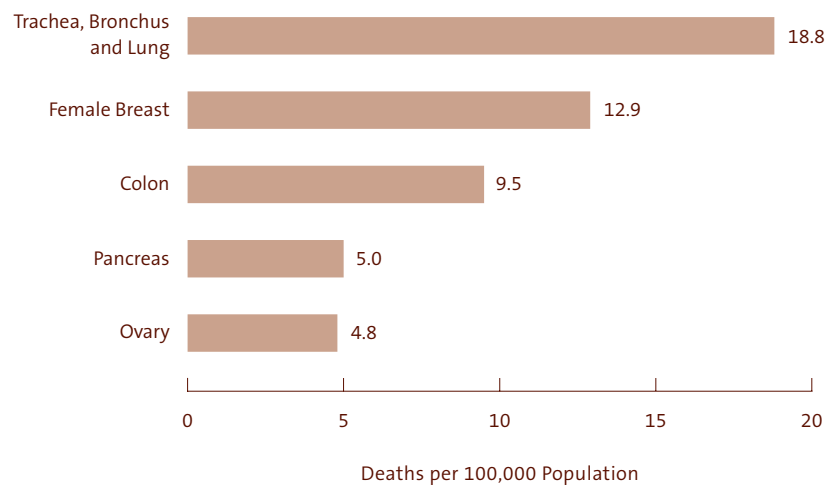
NOTE: See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths."

Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.39

**Death Rates, Leading Cancer Sites: Females**  
American Indians and Alaska Natives (1996-1998)

The leading site for cancer deaths among AI/AN females in 1996-1998 was trachea, bronchus, and lung. About 46 percent more AI/AN females died of this type of cancer than the next leading site, breast. In turn, the likelihood of dying from breast cancer was about 36 percent greater than the next leading type of cancer, colon. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.



**Table 4.39****Leading Sites for Cancer Deaths for Females**

American Indians and Alaska Natives, IHS Service Area, 1996-1998

*(Rate per 100,000 Population)*

Site of Cancer Death	Number		Rate	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>All Sites</b>	<b>1,853</b>	<b>2,139</b>	<b>85.1</b>	<b>98.2</b>
Trachea, bronchus and lung	339	410	15.6	18.8
Female breast	247	281	11.3	12.9
Colon	171	207	7.9	9.5
Pancreas	95	108	4.4	5.0
Ovary	94	105	4.3	4.8
Stomach	82	92	3.8	4.2
Liver	74	83	3.4	3.8
Leukemia	67	80	3.1	3.7
Cervix uteri	67	79	3.1	3.6
Kidney	53	57	2.4	2.6
Multiple myeloma	47	50	2.2	2.3
Gallbladder	40	44	1.8	2.0
Rectum, rectosigmoid junction and anus	28	33	1.3	1.5
Brain	25	32	1.1	1.5
Esophagus	20	23	0.9	1.1
Connective and other soft tissue	19	23	0.9	1.1
Bladder	14	16	0.6	0.7
Melanoma of skin	11	14	0.5	0.6
Pharynx	12	12	0.6	0.6
Larynx	7	10	0.3	0.5
Bone and articular cartilage	8	8	0.4	0.4
Hodgkin's disease	7	8	0.3	0.4
Thyroid gland	5	6	0.2	0.3
Tongue	3	4	0.1	0.2
Lymphosarcoma and reticulosarcoma	4	4	0.2	0.2
Small intestine	3	3	0.1	0.1
All other sites	311	347		

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: See appendix titled "Method Used to Rank Leading Sites of Cancer Deaths."

Causes of death listed are based on the order of adjusted number of deaths.



Chart 4.40

## Death Rates, Leading Cancer Sites: 55 Years of Age and Older

The lead site for cancer deaths among American Indians and Alaska Natives (AI/AN), 55 years of age and older for the 1996-1998 three-year period was trachea, bronchus, and lung. Approximately three times as many AI/AN people in this age group died of this type of cancer than the next leading site, colon. The third and fourth leading sites were genital organs and female breast, respectively. These AI/AN counts have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

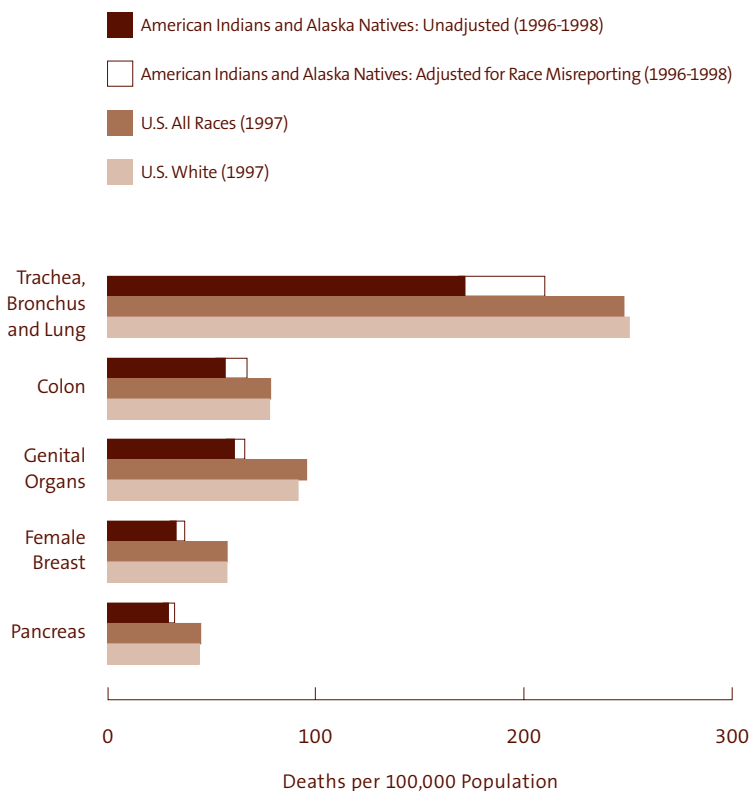


Table 4.40

## Leading Sites for Cancer Deaths for Decedents 55 Years of Age and Older

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

Site of Cancer Death	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number		Rate		Rate	Rate	U.S. All Races	U.S. White
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>				
All Sites	2,980	3,371	622.8	704.5	840.1	838.8	0.8	0.8
Trachea, bronchus and lung	822	1,004	171.8	209.8	248.2	250.8	0.8	0.8
Colon	271	327	56.6	68.3	78.4	77.9	0.9	0.9
Genital Organs	292	322	61.0	67.3	95.7	91.6	0.7	0.7
Breast	158	178	33.0	37.2	57.5	57.4	0.6	0.6
Pancreas	140	159	29.3	33.2	44.8	44.2	0.7	0.8
Liver	138	152	28.8	31.8	18.1	17.1	1.8	1.9
Stomach	125	145	26.1	30.3	20.4	18.3	1.5	1.7
Kidney	105	112	21.9	23.4	18.1	18.6	1.3	1.3
Multiple myeloma	74	79	15.5	16.5	17.6	16.1	0.9	1.0
Leukemia	69	74	14.4	15.5	29.7	31.0	0.5	0.5
Esophagus	57	66	11.9	13.8	17.6	16.8	0.8	0.8
Rectum, rectosigmoid junction and anus	50	56	10.4	11.7	13.0	12.9	0.9	0.9
Gallbladder	53	55	11.1	11.5	6.1	6.1	1.9	1.9
Larynx	31	35	6.5	7.3	6.0	5.5	1.2	1.3
Pharynx	31	32	6.5	6.7	1.5	1.5	4.5	4.5
Bladder	30	32	6.3	6.7	19.7	20.6	0.3	0.3
Brain	27	29	5.6	6.1	15.0	16.0	0.4	0.4
Connective and other soft tissue	19	21	4.0	4.4	5.0	5.1	0.9	0.9
Melanoma of skin	12	12	2.5	2.5	9.3	10.3	0.3	0.2
Thyroid gland	5	6	1.3	1.3	2.6	2.6	0.5	0.5
Tongue	5	5	1.0	1.0	2.6	2.6	0.4	0.4
Bone and articular cartilage	5	5	1.0	1.0	1.2	1.2	0.8	0.8
Small intestine	5	5	1.0	1.0	1.7	1.6	0.6	0.6
Lymphosarcoma and reticulosarcoma	2	2	0.4	0.4	1.2	1.3	0.3	0.3
Hodgkin's disease	2	2	0.4	0.4	1.4	1.5	0.3	0.3
All other sites	452	456						

<sup>1</sup> Adjusted – specified a number, rate, or ratio of rates to compensate for misreporting of AI/AN race on state death certificates.

NOTE: See appendix titled “Method Used to Rank Leading Sites of Cancer Deaths.”  
Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.41

## Death Rates, Leading Cancer Sites: Males, 55 Years of Age and Older

The leading site for cancer deaths among AI/AN males, 55 years and older, in 1996-1998 was trachea, bronchus, and lung. About 3.4 times as many AI/AN males in this age group died of this type of cancer than the next leading site of prostate. In turn, the likelihood of dying from prostate cancer was 17.4 percent greater than the next leading type of cancer, colon. These AI/AN counts have been adjusted for misreporting of AI/AN race on state death certificate.

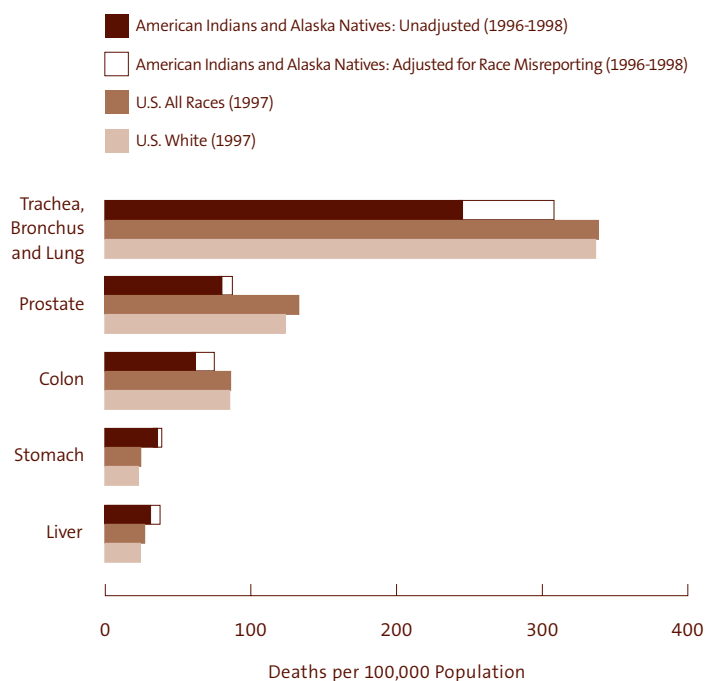


Chart 4.42

## Death Rates, Leading Cancer Sites: Females, 55 Years of Age and Older

The leading site for cancer deaths among American Indian and Alaska Native (AI/AN) females, 55 years and older, in 1996-1998 was trachea, bronchus, and lung. Approximately 2 times as many AI/AN females in this age group died of this type of cancer than the next leading site, breast. In turn, the likelihood of dying from breast cancers was about 6.7 percent greater than the next leading type of cancer, colon. These AI/AN counts have been adjusted for misreporting of AI/AN race on state death certificates.

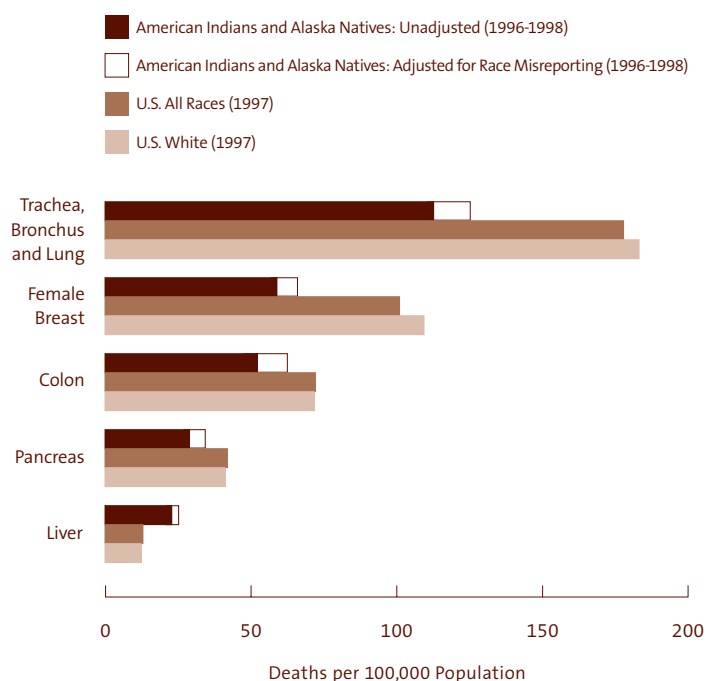


Table 4.41

## Leading Sites for Cancer Deaths by Sex 55 Years of Age and Older

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997

(Rate per 100,000 Population)

Rate per 100,000 Population					U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
Site of Cancer Death	American Indian and Alaska Native		Rate		Rate	Rate	U.S. All Races	U.S. White
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>				
MALE								
All Sites	1,541	1,774	724.9	834.6	1,011.9	999.6	0.8	0.8
Trachea, bronchus and lung	522	644	245.6	303.0	338.9	337.0	0.9	0.9
Prostate	171	189	80.4	88.9	133.2	123.9	0.7	0.7
Colon	132	161	62.1	75.7	86.4	85.8	0.9	0.9
Liver	77	83	36.2	39.0	24.7	23.1	1.6	1.7
Stomach	66	77	31.0	36.2	27.4	24.5	1.3	1.5
Pancreas	63	71	29.6	33.4	48.5	48.0	0.7	0.7
Kidney	64	69	30.1	32.5	24.8	25.3	1.3	1.3
Esophagus	38	44	17.9	20.7	29.9	28.5	0.7	0.7
Leukemia	37	38	17.4	17.9	37.5	39.0	0.5	0.5
Multiple myeloma	32	35	15.1	16.5	19.9	18.9	0.8	0.9
Rectum, rectosigmoid junction and anus	30	33	14.1	15.5	15.8	15.7	1.0	1.0
Larynx	24	25	11.3	11.8	10.9	9.9	1.1	1.2
Gallbladder	20	20	9.4	9.4	5.1	5.1	1.8	1.8
Bladder	16	16	7.5	7.5	29.8	31.4	0.3	0.2
Brain	12	13	5.6	6.1	17.7	18.9	0.3	0.3
Connective and other soft tissue	6	6	2.8	2.8	5.3	5.5	0.5	0.5
Melanoma of skin	6	6	2.8	2.8	13.3	14.8	0.2	0.2
Pharynx	5	5	2.4	2.4	2.3	2.2	1.0	1.1
Tongue	3	3	1.4	1.4	3.8	3.6	0.4	0.4
Small intestine	3	3	1.4	1.4	2.0	1.9	0.7	0.7
Penis	2	2	0.9	0.9	0.9	0.9	1.0	1.0
Thyroid gland	1	1	0.5	0.5	2.5	2.5	0.2	0.2
Bone and articular cartilage	1	1	0.5	0.5	1.4	1.4	0.3	0.3
Male breast	1	1	0.5	0.5	1.3	1.2	0.4	0.4
Hodgkins disease	1	1	0.5	0.5	1.5	1.6	0.3	0.3
All other sites	208	227						
FEMALE								
All Sites	1,400	1,597	526.4	600.5	707.0	712.9	0.8	0.8
Trachea, bronchus and lung	300	360	112.8	135.4	178.0	183.3	0.8	0.7
Female breast	157	177	59.0	66.6	101.1	101.4	0.7	0.7
Colon	139	166	52.3	62.4	72.2	71.8	0.9	0.9
Pancreas	77	88	29.0	33.1	42.0	41.2	0.8	0.8
Liver	61	69	22.9	25.9	13.0	12.4	2.0	2.1
Stomach	59	68	22.2	25.6	15.0	13.4	1.7	1.9
Ovary	59	64	22.2	24.1	3.6	3.8	6.7	1.9
Multiple myeloma	42	44	15.8	16.5	14.9	14.0	1.1	1.2
Kidney	41	43	15.4	16.2	12.9	13.3	1.3	1.2
Leukemia	32	36	12.0	13.5	23.7	24.7	0.6	0.5
Cervix uteri	32	36	12.0	13.5	7.8	8.5	1.7	1.6
Gallbladder	33	35	12.4	13.2	6.8	6.9	1.9	1.9
Rectum, rectosigmoid junction and anus	20	23	7.5	8.6	10.8	10.7	0.8	0.8
Esophagus	19	22	7.1	8.3	8.1	7.6	1.0	1.1
Bladder	14	16	5.3	6.0	11.9	12.1	0.5	0.5
Brain	15	16	5.6	6.0	12.9	13.8	0.5	0.4
Connective and other soft tissue	13	15	4.9	5.6	4.8	4.7	1.2	1.2
Uterus	11	12	4.1	4.5	8.6	8.1	0.5	0.6
Larynx	7	10	2.6	3.8	2.2	2.1	1.7	1.8
Melanoma of skin	6	6	2.3	2.3	6.2	6.8	0.4	0.3
Thyroid gland	4	5	1.5	1.9	2.7	2.6	0.7	0.7
Bone and articular cartilage	4	4	1.5	1.5	1.0	1.0	1.5	1.5
Pharynx	3	3	1.1	1.1	2.3	0.9	0.5	1.3
Tongue	3	2	1.1	0.8	1.7	1.8	0.4	0.4
Lymphosarcoma and reticulosarcoma	2	2	0.8	0.8	1.1	1.1	0.7	0.7
Small intestine	2	2	0.8	0.8	1.5	1.4	0.5	0.5
Hodgkin's disease	1	1	0.4	0.4	1.3	1.4	0.3	0.3
All other sites	244	272						

<sup>1</sup> Adjusted – specified a number, rate, or ratio of rates to compensate for misreporting of AI/AN race on state death certificates.

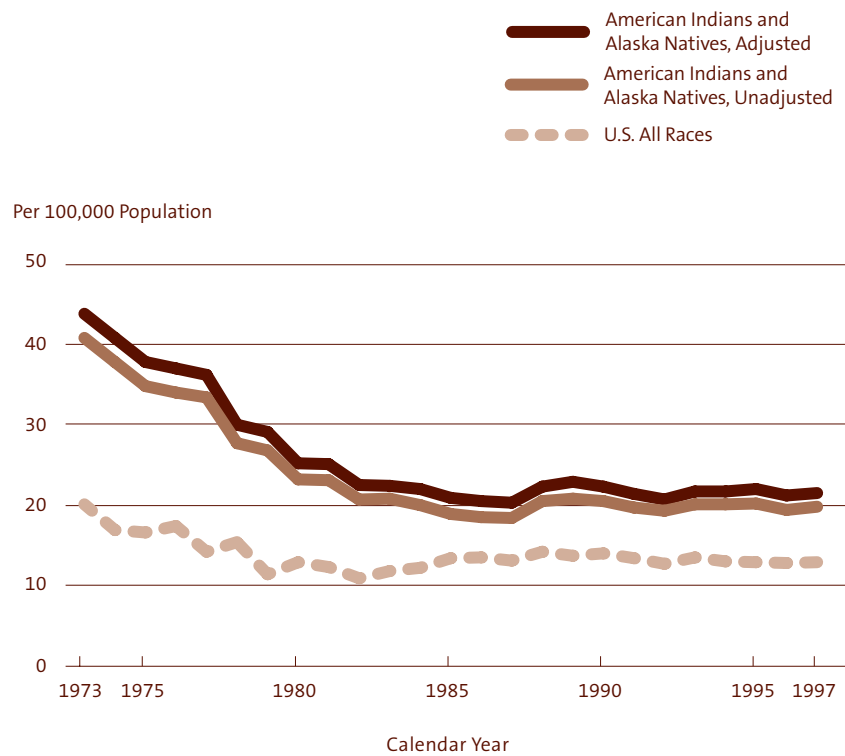
NOTE: See appendix titled “Method Used to Rank Leading Sites of Cancer Deaths.”

Causes of death listed are based on the order of adjusted number of deaths.

Chart 4.43

## Age-Adjusted Pneumonia and Influenza Death Rates

The age-adjusted pneumonia and influenza death rate for AI/AN varied between 43.8 and 21.5 between 1972-1974 and 1996-1998. 1986-1988, marked a decline to 20.3 and in 1996-1998 an increase to 21.5. The 1996-1998 rate is 1.7 times greater than the U.S. all-races rate of 12.9 for 1997. These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on state death certificates.



**Table 4.43****Pneumonia and Influenza Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	301	319						
1996-1998 (1997)	266	287	19.8	21.5	12.9	12.4	1.7	1.7
1995-1997 (1996)	278	309	19.4	21.2	12.8	12.2	1.7	1.7
1994-1996 (1995)	265	282	20.2	22.0	12.9	12.4	1.7	1.8
1993-1995 (1994)	297	321	20.1	21.7	13.0	12.5	1.7	1.7
1992-1994 (1993)	265	286	20.1	21.7	13.5	12.9	1.6	1.7
1991-1993 (1992)	241	256	19.3	20.7	12.7	12.1	1.6	1.7
1990-1992 (1991)	237	257	19.7	21.4	13.4	12.8	1.6	1.7
1989-1991 (1990)	259	286	20.5	22.3	14.0	13.4	1.6	1.7
1988-1990 (1989)	248	242	20.8	22.9	13.7	13.0	1.7	1.8
1987-1989 (1988)	221	238	20.5	22.3	14.2	13.6	1.6	1.6
1986-1988 (1987)	220	238	18.4	20.3	13.1	12.5	1.5	1.6
1985-1987 (1986)	174	189	18.5	20.5	13.5	12.9	1.5	1.6
1984-1986 (1985)	206	232	18.9	20.9	13.4	12.8	1.6	1.6
1983-1985 (1984)	200	215	20.0	22.0	12.2	11.6	1.8	1.9
1982-1984 (1983)	170	182	20.8	22.4	11.8	11.3	1.9	2.0
1981-1983 (1982)	202	217	20.7	22.5	10.9	10.3	2.1	2.2
1980-1982 (1981)	181	198	23.1	25.1	12.3	11.6	2.0	2.2
1979-1981 (1980)	215	233	23.2	25.2	12.9	12.2	2.0	2.1
1978-1980 (1979)	174	187	26.8	29.1	11.4	10.7	2.6	2.7
1977-1979 (1978)	241	260	27.7	30.0	15.4	14.5	1.9	2.1
1976-1978 (1977)	193	208	33.4	36.2	14.2	13.2	2.5	2.7
1975-1977 (1976)	259	283	34.0	37.0	17.4	16.3	2.1	2.3
1974-1976 (1975)	225	246	34.8	37.8	16.6	15.6	2.2	2.4
1973-1975 (1974)	187	199	37.8	40.8	16.9	15.7	2.4	2.6
1972-1974 (1973)	269	291	40.8	43.8	20.1	18.5	2.2	2.4
(1972)	234	253			20.8	19.2		
1954-1956 (1955)	384		64.4		21.0	18.4		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.44

**Pneumonia and Influenza Death Rates by Age and Sex**  
American Indians and Alaska Natives (1996-1998)

The age-specific pneumonia and influenza death rate (1996-1998) for AI/AN males and females increased sharply starting at age 85 years as it did for U.S. all-races males and females. The AI/AN male rate was greater than the AI/AN female rate for all age groups except for 1 to 14 years. These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on state death certificates.

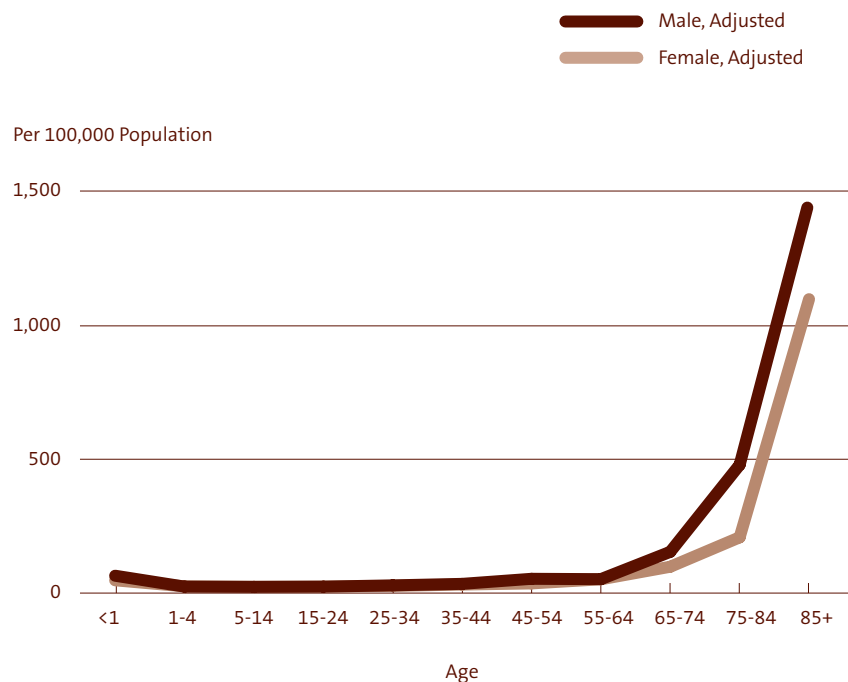


Table 4.44

## Pneumonia and Influenza Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	32.9	33.8	44.0	42.2	21.6	25.1
1-4 years	1.7	2.0	1.5	1.5	2.0	2.5
5-14 years	0.4	0.8	0.4	0.6	0.4	0.9
15-24 years	1.2	1.4	1.0	1.5	1.3	1.3
25-34 years	4.3	5.2	5.6	6.2	3.0	4.3
35-44 years	9.5	10.5	11.4	11.8	7.8	9.2
45-54 years	20.6	21.8	28.9	30.7	13.0	13.5
55-64 years	27.4	29.1	27.6	29.4	27.2	28.8
65-74 years	91.7	100.3	119.3	131.3	69.8	75.7
75-84 years	262.7	294.2	398.1	455.9	171.7	185.4
85 years +	1,175.4	1,209.7	1,390.9	1,444.4	1,050.8	1,074.0

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	11.1	13.2	8.8	8.7	10.8	6.5
1-4 years	1.2	1.1	1.2	1.0	0.9	1.1
5-14 years	0.4	0.4	0.4	0.3	0.3	0.3
15-24 years	0.6	0.6	0.6	0.5	0.6	0.5
25-34 years	1.3	1.6	1.1	1.1	1.3	0.8
35-44 years	3.2	3.9	2.5	2.6	3.2	2.1
45-54 years	6.6	8.4	5.0	5.6	6.8	4.4
55-64 years	17.2	21.1	13.7	15.6	18.6	12.7
65-74 years	57.0	74.3	42.9	55.0	71.5	41.5
75-84 years	233.7	301.6	189.3	233.0	298.8	189.8
85 years +	1,024.7	1,250.5	933.7	1,049.2	1,280.5	957.1

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.



Chart 4.45

## Age-Adjusted Tuberculosis Death Rates

The age-adjusted tuberculosis death rate of AI/AN has dropped from 10.7 deaths per 100,000 population in 1972-1974 to 1.5 during the three-year period 1996-1998, is a decrease of 86 percent. The 1996-1998 rate (1.5) is 5 times the U.S. all-races rate (0.3) for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

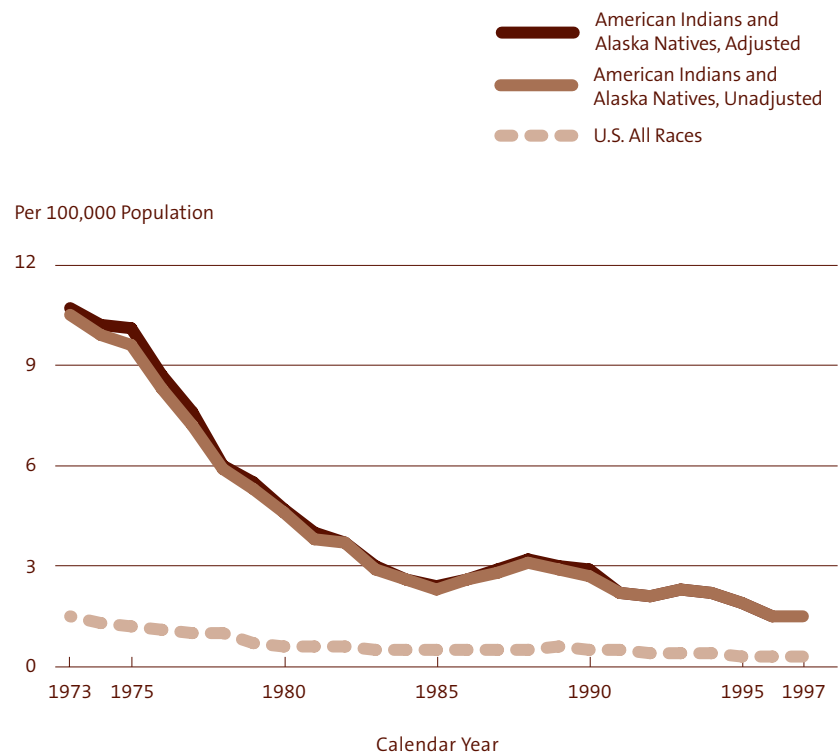


Table 4.45

## Tuberculosis Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	17	18						
1996-1998 (1997)	20	21	1.5	1.5	0.3	0.2	5.0	7.5
1995-1997 (1996)	14	14	1.5	1.5	0.3	0.2	5.0	7.5
1994-1996 (1995)	18	19	1.9	1.9	0.3	0.2	6.3	9.5
1993-1995 (1994)	30	30	2.2	2.2	0.4	0.2	5.5	11.0
1992-1994 (1993)	24	24	2.3	2.3	0.4	0.3	5.8	7.7
1991-1993 (1992)	19	19	2.1	2.1	0.4	0.3	5.3	7.0
1990-1992 (1991)	25	25	2.2	2.2	0.5	0.3	4.4	7.3
1989-1991 (1990)	24	25	2.7	2.9	0.5	0.3	5.8	9.7
1988-1990 (1989)	33	36	2.9	3.0	0.6	0.3	5.0	10.0
1987-1989 (1988)	25	25	3.1	3.2	0.5	0.3	6.4	10.7
1986-1988 (1987)	28	28	2.8	2.9	0.5	0.3	5.8	9.7
1985-1987 (1986)	24	26	2.6	2.6	0.5	0.3	5.2	8.7
1984-1986 (1985)	18	18	2.3	2.4	0.5	0.3	4.8	8.0
1983-1985 (1984)	17	18	2.6	2.6	0.5	0.3	5.2	8.7
1982-1984 (1983)	31	31	2.9	3.0	0.5	0.3	6.0	10.0
1981-1983 (1982)	22	23	3.7	3.7	0.6	0.4	6.2	9.3
1980-1982 (1981)	30	30	3.8	4.0	0.6	0.4	6.7	10.0
1979-1981 (1980)	31	33	4.6	4.7	0.6	0.4	7.8	11.8
1978-1980 (1979)	33	33	5.3	5.5	0.7	0.4	7.9	13.8
1977-1979 (1978)	40	42	5.9	6.0	1.0	0.7	6.0	8.6
1976-1978 (1977)	33	34	7.2	7.6	1.0	0.7	7.6	10.9
1975-1977 (1976)	48	51	8.3	8.7	1.1	0.8	7.9	10.9
1974-1976 (1975)	53	56	9.6	10.1	1.2	0.9	8.4	11.2
1973-1975 (1974)	48	49	9.9	10.2	1.3	0.9	7.8	11.3
1972-1974 (1973)	45	45	10.5	10.7	1.5	1.1	7.1	9.7
(1972)	50	53						
1954-1956 (1955)	253		57.9		8.4	6.2		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.46

## Age-Adjusted Diabetes Mellitus Death Rates

The age-adjusted diabetes mellitus death rate for AI/AN varied between 33.1 and 28.7 between 1972-1974 and 1981-1983. Since 1981-1983, the rate increased sharply to 52.8 for the latest three-year period of 1996-1998. This latest rate of 52.8 is 3.9 times the U.S. all-races rate (13.5) for 1997, the highest U.S. rate since 1973 when the rate was 13.2. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

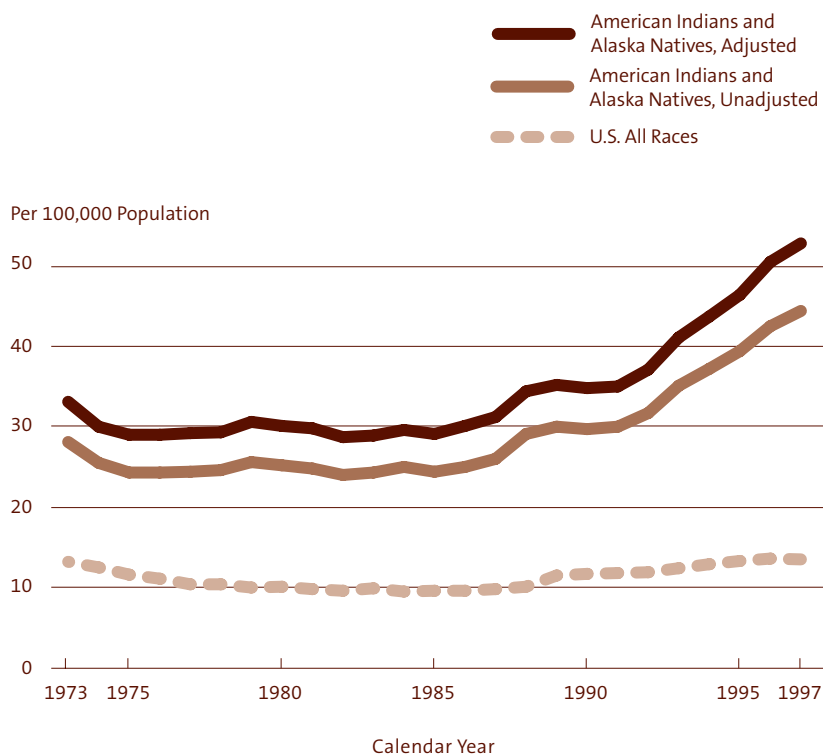


Table 4.46

## Diabetes Mellitus Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	516	604						
1996-1998 (1997)	546	649	44.4	52.8	13.5	11.9	3.9	4.4
1995-1997 (1996)	449	527	42.5	50.5	13.6	12.0	3.7	4.2
1994-1996 (1995)	426	497	39.4	46.4	13.3	11.7	3.5	4.0
1993-1995 (1994)	399	467	37.2	43.7	12.9	11.5	3.4	3.8
1992-1994 (1993)	354	412	35.1	41.1	12.4	11.0	3.3	3.7
1991-1993 (1992)	324	373	31.7	37.1	11.9	10.5	3.1	3.5
1990-1992 (1991)	275	320	30.0	35.0	11.8	10.5	3.0	3.3
1989-1991 (1990)	285	330	29.7	34.8	11.7	10.4	3.0	3.3
1988-1990 (1989)	301	349	30.0	35.2	11.5	10.3	3.1	3.4
1987-1989 (1988)	260	303	29.1	34.4	10.1	9.0	3.4	3.8
1986-1988 (1987)	227	274	26.0	31.2	9.8	8.7	3.2	3.6
1985-1987 (1986)	195	234	25.0	30.1	9.6	8.5	3.1	3.5
1984-1986 (1985)	208	245	24.4	29.1	9.6	8.6	3.0	3.4
1983-1985 (1984)	189	222	25.0	29.6	9.5	8.5	3.1	3.5
1982-1984 (1983)	180	212	24.3	28.9	9.9	8.9	2.9	3.2
1981-1983 (1982)	164	197	24.0	28.7	9.6	8.7	3.0	3.3
1980-1982 (1981)	156	185	24.8	29.8	9.8	8.8	3.0	3.4
1979-1981 (1980)	173	206	25.2	30.1	10.1	9.1	3.0	3.3
1978-1980 (1979)	153	180	25.6	30.6	10.0	9.0	3.1	3.4
1977-1979 (1978)	147	174	24.6	29.3	10.4	9.4	2.8	3.1
1976-1978 (1977)	134	158	24.4	29.2	10.4	9.4	2.8	3.1
1975-1977 (1976)	125	151	24.3	29.0	11.1	10.0	2.6	2.9
1974-1976 (1975)	123	145	24.3	29.0	11.6	10.4	2.5	2.8
1973-1975 (1974)	110	131	25.5	30.0	12.5	11.4	2.4	2.6
1972-1974 (1973)	117	134	28.1	33.1	13.2	11.8	2.5	2.8
(1972)	129	153						
1954-1956 (1955)	64		17.0		13.0	12.6		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.47

### Diabetes Mellitus Death Rates by Age and Sex American Indians and Alaska Natives (1996-1998)

The age-specific diabetes mellitus death rate (1996-1998) for AI/AN females increased sharply with age. The same was true for AI/AN males until the 85 years and over age group. Starting with age group 75 to 84 the AI/AN female rate (553.9) increases and is 63 percent greater than the AI/AN male rate (340.3). These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

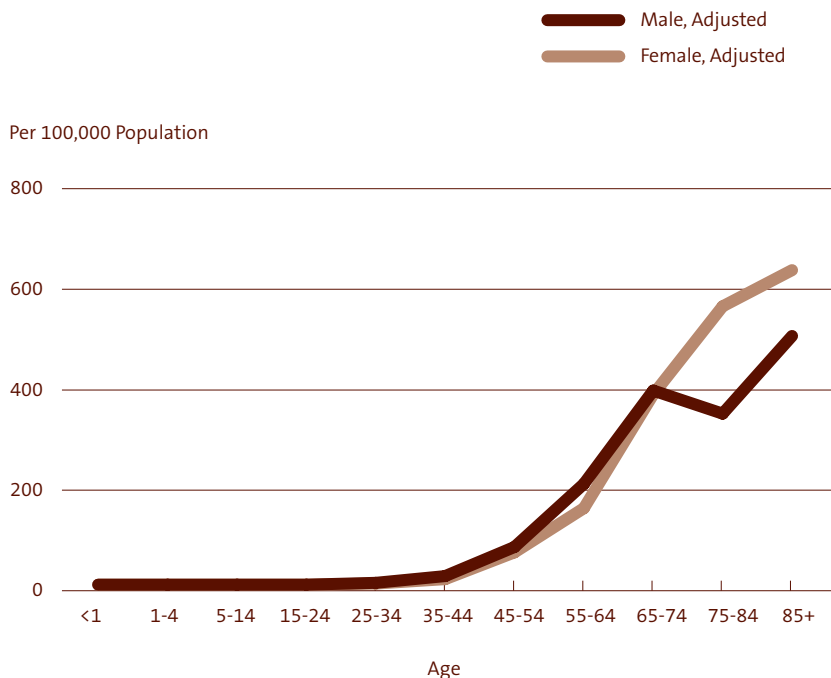


Table 4.47

## Diabetes Mellitus Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	—*	—*	—*	—*	—*	—*
25-34 years	2.5	2.9	3.4	3.7	1.6	2.2
35-44 years	12.7	13.9	15.9	17.1	9.6	11.0
45-54 years	58.2	69.4	64.5	75.0	52.4	64.3
55-64 years	143.4	174.7	166.5	200.6	123.4	152.2
65-74 years	317.3	382.0	323.7	386.3	312.3	378.6
75-84 years	402.3	468.0	296.0	340.3	473.8	553.9
85 years +	568.1	577.9	481.5	494.9	618.1	625.9

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.1	—*	—*	—*	—*	—*
15-24 years	0.4	0.4	0.4	0.3	0.3	0.3
25-34 years	1.6	1.6	1.5	1.3	1.2	1.3
35-44 years	4.2	5.3	3.2	3.6	4.6	2.6
45-54 years	12.9	14.8	11.0	10.7	12.5	9.0
55-64 years	38.4	40.5	36.4	32.1	35.1	29.3
65-74 years	88.2	97.1	81.0	78.4	89.2	69.5
75-84 years	167.4	181.9	157.9	154.9	173.3	142.7
85 years +	294.1	316.2	285.2	277.3	308.7	264.9

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.48

## Age-Adjusted Heart Disease Death Rates

The age-adjusted heart disease death rate for AI/AN has been relatively stable since 1989-1991. The AI/AN rate (193.4) for the three-year period of 1972-1974 was 21 percent lower than the U.S. all-races rate (244.4) for 1973. The AI/AN rate (157.1) for the three-year period of 1996-1998 was 20 percent greater than the U.S. all-races rate (130.5) for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

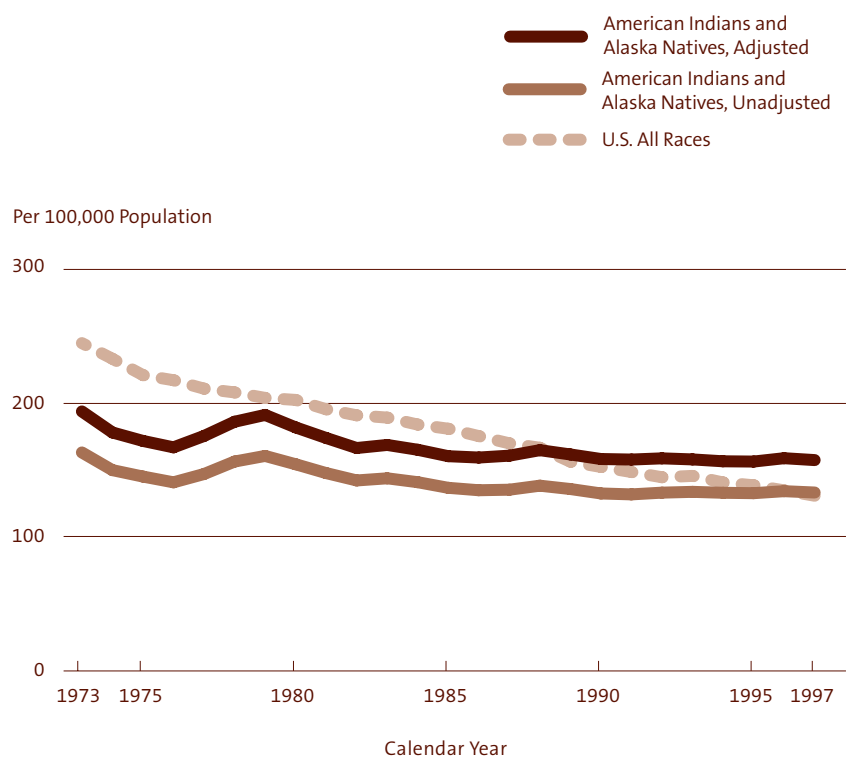


Table 4.48

## Heart Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number		Rate		Rate		U.S. All Races	U.S. White
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Rate	Rate		
(1998)	1,684	1,964						
1996-1998 (1997)	1,683	1,970	132.9	157.1	130.5	125.9	1.2	1.2
1995-1997 (1996)	1,600	1,877	133.9	158.5	134.5	129.8	1.2	1.2
1994-1996 (1995)	1,573	1,852	132.4	156.0	138.3	133.1	1.1	1.2
1993-1995 (1994)	1,515	1,754	132.7	156.2	140.4	135.4	1.1	1.2
1992-1994 (1993)	1,524	1,779	133.4	157.6	145.3	139.9	1.1	1.1
1991-1993 (1992)	1,484	1,764	132.8	158.4	144.3	139.2	1.1	1.1
1990-1992 (1991)	1,416	1,682	131.5	157.5	148.2	143.1	1.1	1.1
1989-1991 (1990)	1,349	1,599	132.2	157.9	152.0	146.9	1.0	1.1
1988-1990 (1989)	1,408	1,661	135.5	161.3	155.9	151.0	1.0	1.1
1987-1989 (1988)	1,359	1,600	138.0	164.5	166.3	161.5	1.0	1.0
1986-1988 (1987)	1,312	1,553	135.0	160.4	169.6	165.0	0.9	1.0
1985-1987 (1986)	1,190	1,389	134.6	159.0	175.0	170.4	0.9	0.9
1984-1986 (1985)	1,223	1,422	136.4	160.0	180.5	176.1	0.9	0.9
1983-1985 (1984)	1,206	1,405	140.6	164.8	183.6	179.5	0.9	0.9
1982-1984 (1983)	1,117	1,306	143.5	168.4	188.8	184.6	0.9	0.9
1981-1983 (1982)	1,102	1,285	141.9	166.1	190.5	186.8	0.9	0.9
1980-1982 (1981)	1,000	1,162	147.4	173.6	195.0	191.1	0.9	0.9
1979-1981 (1980)	1,096	1,300	154.0	181.5	202.0	197.6	0.9	0.9
1978-1980 (1979)	1,096	1,282	160.2	190.8	203.5	199.8	0.9	1.0
1977-1979 (1978)	965	1,157	156.0	185.7	207.6	204.0	0.9	0.9
1976-1978 (1977)	873	1,036	146.7	175.1	210.4	206.8	0.8	0.8
1975-1977 (1976)	798	934	140.5	166.6	216.7	213.5	0.8	0.8
1974-1976 (1975)	729	858	144.8	171.4	220.5	217.2	0.8	0.8
1973-1975 (1974)	796	940	149.6	177.7	232.7	228.8	0.8	0.8
1972-1974 (1973)	716	847	162.8	193.4	244.4	239.9	0.8	0.8
(1972)	763	902						
1954-1956 (1955)			223.0		291.3	285.6		

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.49

**Heart Disease Death Rates by Age and Sex**  
American Indians and Alaska Natives (1996-1998)

The age-specific heart disease death rate (1996-1998) for AI/AN males for age-groups 25 and older was higher in comparison to AI/AN females. The rate for both AI/AN males and females increased with age starting with the 5 to 14 age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

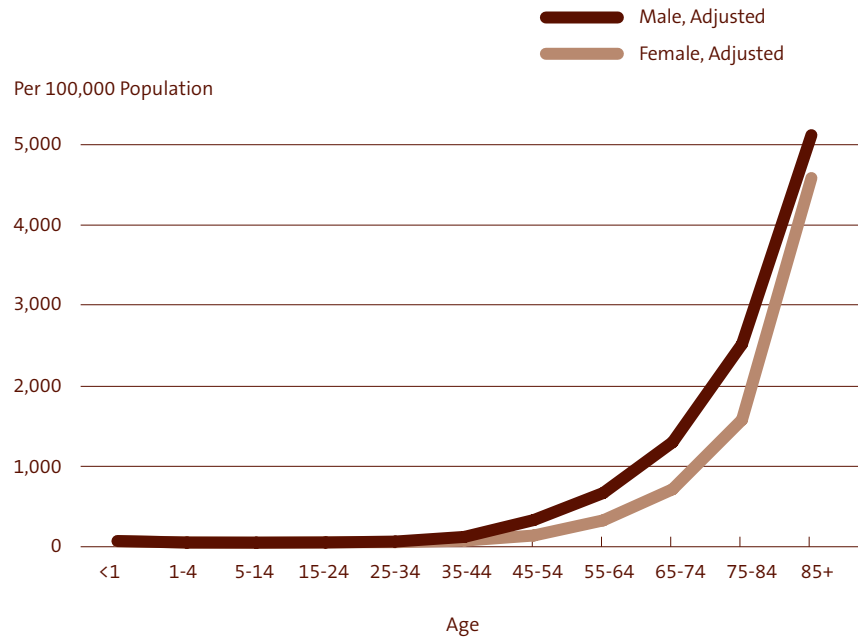


Table 4.49

## Heart Disease Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	19.6	19.6	19.4	21.1	19.8	18.0
1-4 years	2.5	3.0	1.5	1.5	3.5	4.5
5-14 years	0.8	0.9	0.9	0.9	0.7	0.9
15-24 years	3.1	4.1	2.3	2.6	4.0	5.6
25-34 years	8.8	10.3	12.6	14.3	5.1	6.5
35-44 years	41.6	48.6	64.1	72.4	20.6	26.3
45-54 years	153.2	181.8	236.7	282.2	76.7	89.7
55-64 years	361.4	436.3	517.0	618.2	225.9	278.0
65-74 years	774.6	923.7	1,053.1	1,250.0	553.7	664.9
75-84 years	1,595.5	1,907.5	2,021.1	2,470.2	1,309.3	1,529.0
85 years +	4,441.9	4,730.9	4,667.6	5,068.9	4,311.5	4,535.6

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	16.4	18.0	14.7	14.6	16.6	12.6
1-4 years	1.4	1.5	1.2	1.2	1.1	1.2
5-14 years	0.8	0.9	0.7	0.7	0.9	0.6
15-24 years	3.0	3.6	2.4	2.5	3.0	1.9
25-34 years	8.3	10.8	5.8	7.0	9.3	4.6
35-44 years	30.1	43.7	16.5	26.1	39.3	12.8
45-54 years	104.9	157.7	54.3	94.6	145.4	44.9
55-64 years	302.4	434.6	182.1	282.3	411.2	162.5
65-74 years	753.7	1,031.1	529.4	732.5	1,015.1	500.7
75-84 years	1,943.6	2,443.6	1,616.6	1,936.4	2,453.7	1,595.9
85 years +	6,198.9	6,658.5	6,013.7	6,313.4	6,829.7	6,108.0

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.50

## Age-Adjusted Cerebrovascular Diseases Death Rates

The age-adjusted cerebrovascular death rate for AI/AN has been relatively stable since the 1985-1987 time period. The AI/AN rate (53.0 deaths per 100,000 population) for the 1972-1974 three-year period when compared to the AI/AN rate (29.5 deaths per 100,000 population) 1996-1998 has decreased 44 percent. The AI/AN 1996-1998 rate (29.5) is 14 percent greater than the U.S. all-races rate (25.9) for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

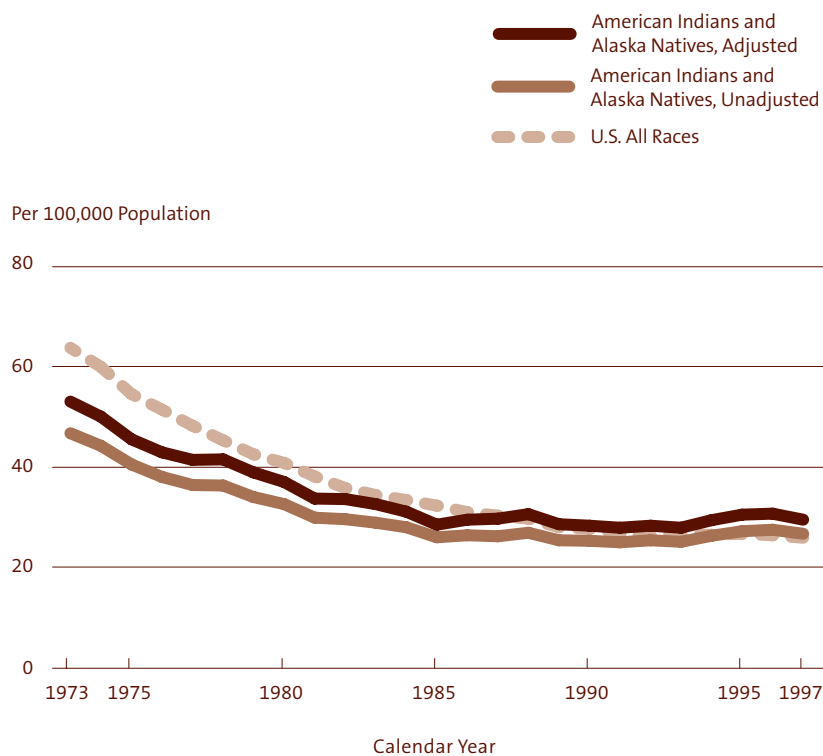


Table 4.50

## Cerebrovascular Diseases Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1973-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	347	380						
1996-1998 (1997)	348	380	26.7	29.5	25.9	24.0	1.1	1.2
1995-1997 (1996)	366	404	27.5	30.7	26.4	24.5	1.2	1.3
1994-1996 (1995)	358	402	27.2	30.5	26.7	24.7	1.1	1.2
1993-1995 (1994)	305	337	26.3	29.4	26.5	24.5	1.1	1.2
1992-1994 (1993)	305	335	25.1	27.9	26.5	24.5	1.1	1.1
1991-1993 (1992)	288	320	25.4	28.3	26.2	24.2	1.1	1.2
1990-1992 (1991)	294	329	25.0	27.9	26.8	24.7	1.0	1.1
1989-1991 (1990)	275	307	25.3	28.3	27.7	25.5	1.0	1.1
1988-1990 (1989)	270	301	25.4	28.6	28.0	25.9	1.0	1.1
1987-1989 (1988)	275	310	26.9	30.6	29.7	27.5	1.0	1.1
1986-1988 (1987)	282	327	26.2	29.7	30.3	28.1	1.0	1.1
1985-1987 (1986)	232	253	26.4	29.5	31.0	28.8	1.0	1.0
1984-1986 (1985)	254	276	26.0	28.5	32.3	30.1	0.9	0.9
1983-1985 (1984)	245	268	28.0	31.1	33.4	31.1	0.9	1.0
1982-1984 (1983)	236	268	28.9	32.6	34.4	32.0	0.9	1.0
1981-1983 (1982)	237	269	29.6	33.6	35.8	33.4	0.9	1.0
1980-1982 (1981)	241	268	29.9	33.7	38.1	35.6	0.9	0.9
1979-1981 (1980)	225	252	32.6	37.0	40.8	38.0	0.9	1.0
1978-1980 (1979)	259	299	34.0	38.9	42.5	39.8	0.9	1.0
1977-1979 (1978)	227	258	36.3	41.5	45.3	42.5	0.9	1.0
1976-1978 (1977)	234	265	36.4	41.4	48.2	45.3	0.9	0.9
1975-1977 (1976)	226	255	38.0	42.9	51.4	48.5	0.8	0.9
1974-1976 (1975)	215	240	40.5	45.5	54.5	51.3	0.8	0.9
1973-1975 (1974)	233	259	44.2	50.0	59.9	56.4	0.8	0.9
1972-1974 (1973)	239	275	46.7	53.0	63.7	59.6	0.8	0.9
(1972)	209	235						

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Starting in 1972 data are first available and are shown above for specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.51

**Cerebrovascular Diseases Death Rates by Age and Sex**  
American Indians and Alaska Natives (1996-1998)

The age-specific cerebrovascular diseases death rate (1996-1998) was relatively close for AI/AN males and females for each age-group. The rate for both AI/AN genders increased with age beginning with the 15 to 24 year age group. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

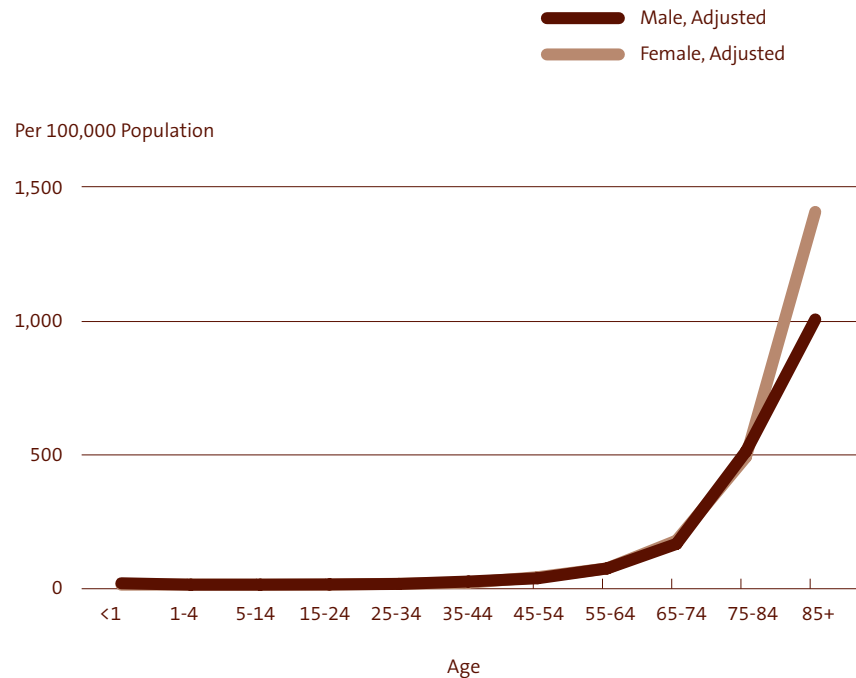


Table 4.51

## Cerebrovascular Diseases Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	2.7	2.7	3.5	5.3	1.8	—*
1-4 years	0.2	0.2	—*	—*	0.5	0.5
5-14 years	0.1	0.1	0.2	0.2	—*	—*
15-24 years	0.7	0.7	1.0	1.0	0.3	0.3
25-34 years	2.6	3.2	2.2	2.8	3.0	3.5
35-44 years	8.3	9.4	10.2	11.8	6.4	7.1
45-54 years	24.1	26.2	23.4	24.0	24.8	28.2
55-64 years	56.1	60.8	56.1	60.7	56.1	60.9
65-74 years	141.9	159.0	137.2	152.2	145.5	164.4
75-84 years	424.2	484.4	438.9	496.8	414.3	476.1
85 years +	1,219.5	1,243.9	976.3	989.7	1,359.9	1,390.8

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	7.0	7.6	6.3	5.9	6.4	5.4
1-4 years	0.4	0.5	0.3	0.3	0.3	—*
5-14 years	0.2	0.2	0.2	0.2	0.2	0.2
15-24 years	0.5	0.6	0.5	0.5	0.5	0.4
25-34 years	1.7	1.7	1.7	1.5	1.5	1.5
35-44 years	6.3	6.5	6.2	4.7	5.0	4.4
45-54 years	16.9	19.2	14.8	13.1	14.6	11.6
55-64 years	44.4	51.4	37.9	36.9	42.3	31.8
65-74 years	134.8	153.1	120.1	125.1	141.8	111.4
75-84 years	462.0	488.7	444.4	454.5	480.3	437.5
85 years +	1,584.6	1,500.7	1,618.4	1,613.0	1,530.6	1,645.8

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.52

## Age-Adjusted Alzheimer's Disease Death Rates

The age-adjusted Alzheimer's disease AI/AN death rate of 0.3 deaths per 100,000 population for the 1979-1981 three-year period increased to 1.3 death per 100,000 population for 1996-1998. This is an increase of 333 percent. The U.S. all-races rate of 2.7 in 1997 is 2.1 times the 1996-1998 AI/AN rate of 1.3. These AI/AN rates have been adjusted to compensate for mis-reporting of AI/AN race on state death certificates.

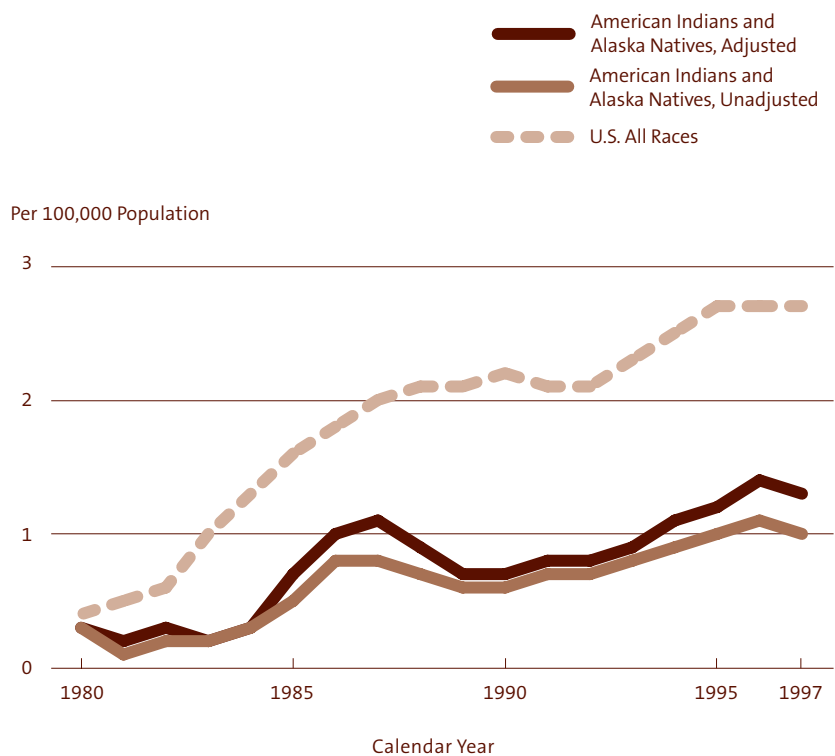


Table 4.52

## Alzheimer's Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1980-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	17	20						
1996-1998 (1997)	18	24	1.0	1.3	2.7	2.9	0.5	0.4
1995-1997 (1996)	18	24	1.1	1.4	2.7	2.8	0.5	0.5
1994-1996 (1995)	18	19	1.0	1.2	2.7	2.8	0.4	0.4
1993-1995 (1994)	13	15	0.9	1.1	2.5	2.6	0.4	0.4
1992-1994 (1993)	12	14	0.8	0.9	2.3	2.4	0.4	0.4
1991-1993 (1992)	12	13	0.7	0.8	2.1	2.2	0.4	0.4
1990-1992 (1991)	8	9	0.7	0.8	2.1	2.2	0.4	0.4
1989-1991 (1990)	8	9	0.6	0.7	2.2	2.3	0.3	0.3
1988-1990 (1989)	8	8	0.6	0.7	2.1	2.2	0.3	0.3
1987-1989 (1988)	7	9	0.7	0.9	2.1	2.2	0.4	0.4
1986-1988 (1987)	10	13	0.8	1.1	2.0	2.1	0.6	0.5
1985-1987 (1986)	9	12	0.8	1.0	1.8	1.9	0.6	0.5
1984-1986 (1985)	3	4	0.5	0.7	1.6	1.7	0.4	0.4
1983-1985 (1984)	2	2	0.3	0.3	1.3	1.4	0.2	0.2
1982-1984 (1983)	4	4	0.2	0.2	1.0	1.1	0.2	0.2
1981-1983 (1982)	—*	—*	0.2	0.3	0.6	0.7	0.5	0.4
1980-1982 (1981)	2	4	0.1	0.2	0.5	0.5	0.4	0.4
1979-1981 (1980)	1	1	0.3	0.3	0.4	0.4	0.8	0.8
(1979)	2	2						

—\* Represents zero.

<sup>1</sup> Adjusted – specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Alzheimer's death data are introduced in 1979 for the IHS service area. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.



Chart 4.53

Alzheimer’s Disease Death Rates by Age and Sex  
American Indians and Alaska Natives (1996-1998)

The age-specific Alzheimer’s death rate (1996-1998) for AI/AN males were higher than AI/AN females in age groups 64 to 84 years. For the age group 85 years and over, the AI/AN female rate was greater than the AI/AN male rate. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

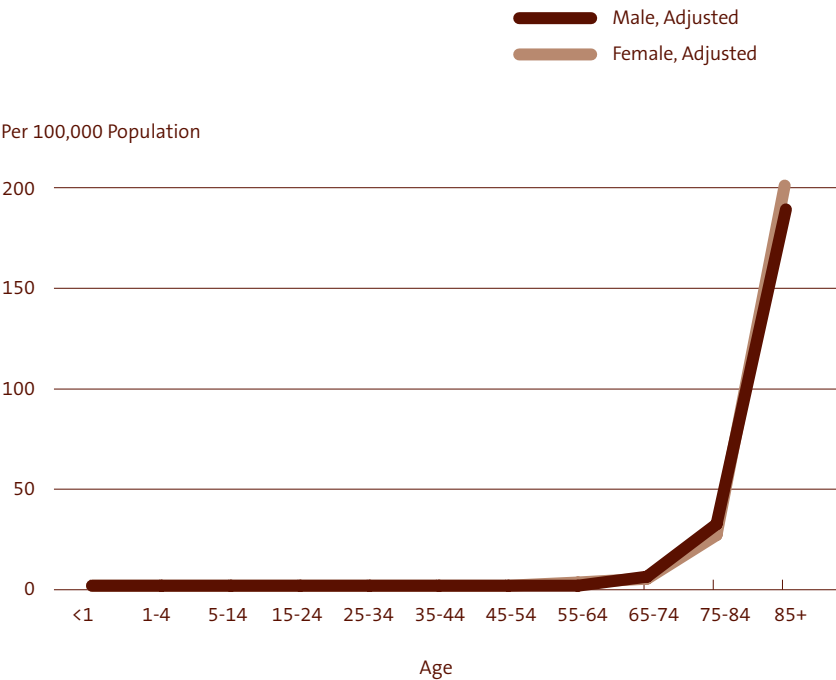


Table 4.53

## Alzheimer's Disease Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	—*	—*	—*	—*	—*	—*
25-34 years	—*	—*	—*	—*	—*	—*
35-44 years	—*	—*	—*	—*	—*	—*
45-54 years	—*	—*	—*	—*	—*	—*
55-64 years	0.4	0.9	—*	—*	0.8	1.6
65-74 years	3.3	4.0	3.0	4.5	3.5	3.5
75-84 years	20.5	27.4	23.8	30.6	18.3	25.2
85 years +	156.7	195.9	160.5	187.2	154.5	200.9

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	—*	—*	—*	—*	—*	—*
15-24 years	—*	—*	—*	—*	—*	—*
25-34 years	—*	—*	—*	—*	—*	—*
35-44 years	—*	—*	—*	—*	—*	—*
45-54 years	0.1	0.1	0.1	0.2	0.1	0.2
55-64 years	1.2	1.2	1.2	1.3	1.3	1.3
65-74 years	10.8	10.7	10.8	11.2	11.1	11.3
75-84 years	73.3	70.0	75.4	76.3	72.2	78.9
85 years +	299.2	248.4	319.7	313.6	259.0	335.2

—\* Represents zero.

<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.

Chart 4.54

## Age-Adjusted Gastrointestinal Disease Death Rates

The age-adjusted gastrointestinal disease death rate for AI/AN has decreased 73 percent since the 1972-1974 rate of 6.6 deaths per 100,000 population. The 1996-1998 rate (1.8 deaths per 100,000 population) is 38 percent higher than the U.S. all-races rate of 1.3 for 1997. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

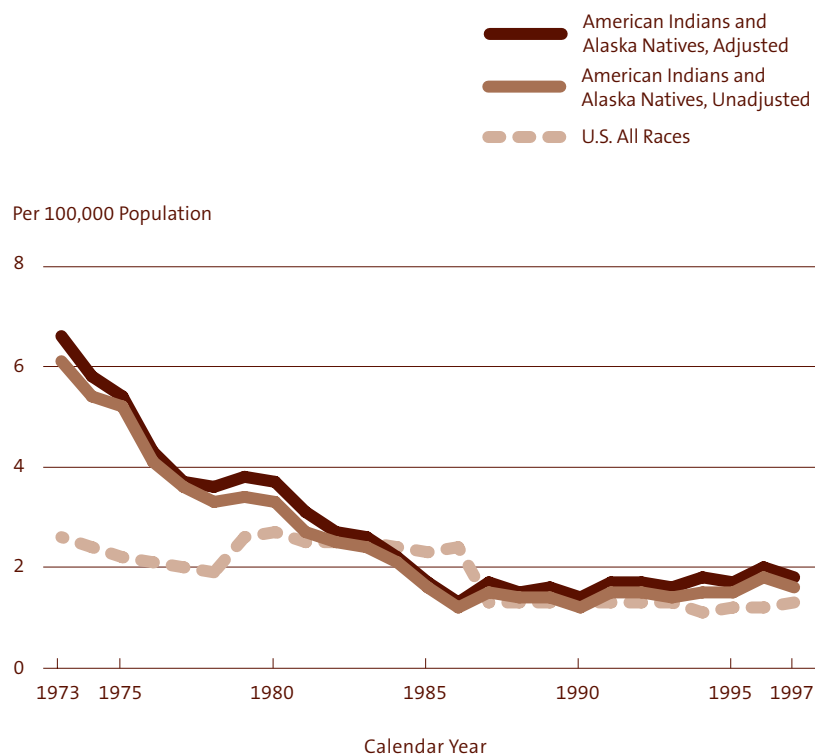


Table 4.54

## Gastrointestinal Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1955-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	22	23						
1996-1998 (1997)	25	28	1.6	1.8	1.3	1.3	1.4	1.4
1995-1997 (1996)	17	20	1.8	2.0	1.2	1.2	1.7	1.7
1994-1996 (1995)	25	28	1.5	1.7	1.2	1.1	1.4	1.5
1993-1995 (1994)	14	16	1.5	1.8	1.1	1.0	1.6	1.8
1992-1994 (1993)	17	20	1.4	1.6	1.3	1.2	1.2	1.3
1991-1993 (1992)	18	20	1.5	1.7	1.3	1.2	1.3	1.4
1990-1992 (1991)	18	20	1.5	1.7	1.3	1.2	1.3	1.4
1989-1991 (1990)	17	20	1.2	1.4	1.3	1.2	1.1	1.2
1988-1990 (1989)	9	10	1.4	1.6	1.3	1.2	1.2	1.3
1987-1989 (1988)	24	26	1.4	1.5	1.3	1.5	1.2	1.0
1986-1988 (1987)	14	15	1.5	1.7	1.3	1.5	1.3	1.1
1985-1987 (1986)	15	16	1.2	1.3	2.4	1.2	0.5	1.1
1984-1986 (1985)	13	15	1.6	1.7	2.3	1.3	0.7	1.3
1983-1985 (1984)	21	22	2.1	2.2	2.4	1.4	0.9	1.6
1982-1984 (1983)	25	25	2.4	2.6	2.5	1.4	1.0	1.9
1981-1983 (1982)	18	20	2.5	2.7	2.5	1.2	1.0	2.3
1980-1982 (1981)	20	23	2.7	3.1	2.5	1.2	1.2	2.6
1979-1981 (1980)	29	33	3.3	3.7	2.7	1.6	1.4	2.3
1978-1980 (1979)	29	31	3.4	3.8	2.6	1.8	1.5	2.1
1977-1979 (1978)	26	27	3.3	3.6	1.9	1.8	1.9	2.0
1976-1978 (1977)	31	33	3.6	3.7	2.0	1.8	1.9	2.1
1975-1977 (1976)	39	39	4.1	4.3	2.1	1.9	2.0	2.3
1974-1976 (1975)	37	39	5.2	5.4	2.2	2.1	2.5	2.6
1973-1975 (1974)	48	52	5.4	5.8	2.4	2.3	2.4	2.5
1972-1974 (1973)	36	37	6.1	6.6	2.6	2.4	2.5	2.8
(1972)	39	43						
1954-1956 (1955)	165		15.4		3.6	3.1		

<sup>1</sup> Adjusted - specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Reservation State data for 1955, the year IHS was established, are presented above. Data from 1972 forward are drawn from specific counties in the IHS service area. Reservation State data and county data are not directly comparable. The AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified. Data from 1979 forward include revised cause-of-death codes to exclude the ICD-9 code 557 (vascular insufficiency of intestine). Currently ICD-9 codes that define gastrointestinal disease death include: 004, 006, 007, 008, 009, 535, 555, 556, 558 and 562.

Chart 4.55

## Human Immunodeficiency Virus (HIV) Disease Death Rates

The number of HIV deaths (55) for AI/AN residing in the entire U.S. in 1997 is over 2.5 times the number (20) in 1987. The number of deaths for 1997 is over one and a half times lower than the number of deaths (96) in 1996. AI/AN comprise 60 percent of all U.S. AI/AN, but in 1997 AI/AN in the service area accounted for 49 percent of the total AI/AN HIV deaths. When the 1997 number of deaths for the IHS service area was adjusted to compensate for misreporting of AI/AN race on state death certificates this number increased to 54 percent.

An adjustment factor is not available for all U.S. AI/AN, but it is expected that the rate of misreporting for all U.S. AI/AN is greater than the rate for the AI/AN in the IHS service area. The adjusted AI/AN rate (3.3) for the three-year period of 1996-1998 is 76 percent lower than the 1997 U.S. all-races rate (5.8). These AI/AN number and rates for the IHS service area have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

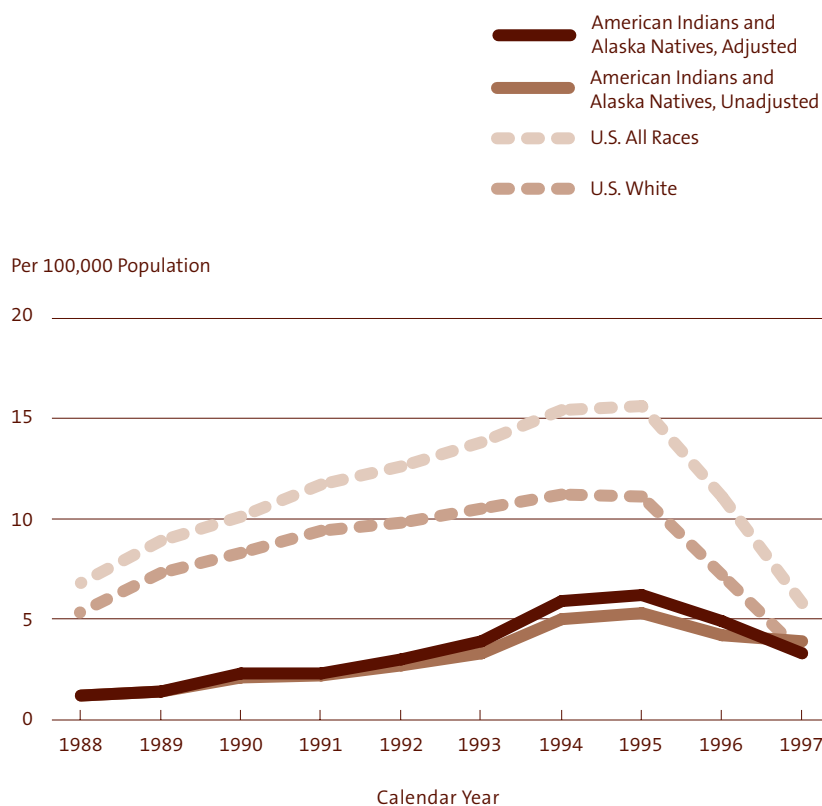


Table 4.55

## Human Immunodeficiency Virus (HIV) Disease Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1988-1997  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native						U.S. All Races	U.S. White
	Entire United States <sup>1</sup>		IHS Service Area					
	Number	Rate	Number		Rate			
			Unadjusted	Adjusted <sup>2</sup>	Unadjusted	Adjusted <sup>2</sup>		
(1998)	51		33	41			4.6	2.6
1996-1998 (1997)	55	2.4	27	30	2.9	3.3	5.8	3.3
1995-1997 (1996)	96	4.2	52	59	4.2	4.9	11.1	7.2
1994-1996 (1995)	154	5.5	84	100	5.3	6.2	15.6	11.1
1993-1995 (1994)	120	5.7	62	75	5.0	5.9	15.4	11.2
1992-1994 (1993)	101	4.2	39	45	3.3	3.9	13.8	10.5
1991-1993 (1992)	57	3.7	20	21	2.7	3.0	12.6	9.8
1990-1992 (1991)	76	2.7	38	42	2.2	2.3	11.7	9.4
1989-1991 (1990)	36	2.5	16	17	2.1	2.3	10.1	8.3
1988-1990 (1989)	36	1.7	16	16	1.4	1.4	8.9	7.3
1987-1989 (1988)	26	1.4	13	13	1.2	1.2	6.8	5.4
(1987)	20		8	10			5.5	4.5

<sup>1</sup> Adjustment factors are only available for the AI/AN population residing in the IHS service area, for that reason, AI/AN numbers and rates for the entire United States (shown above) are based on unadjusted numbers of deaths.

<sup>2</sup> Adjusted — specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Includes cause of death with ICD-9 codes 042-044, first classified in 1987. For all years portrayed above the AI/AN death rate columns present data for the three-year period specified and are age-adjusted to the 1940 standard population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.56

**Human Immunodeficiency Virus (HIV) Disease Death Rates  
by Age and Sex, American Indians and Alaska Natives (1996-1998)**

The age-specific HIV death rate for the three-year period 1996-1998 for AI/AN males was greater for all age groups when reporting deaths in comparison to AI/AN females. There was a sharp increase in the AI/AN male rate (19.3) for age group 35 to 44 years. These AI/AN rates have been adjusted to compensate for misreporting of AI/AN race on state death certificates.

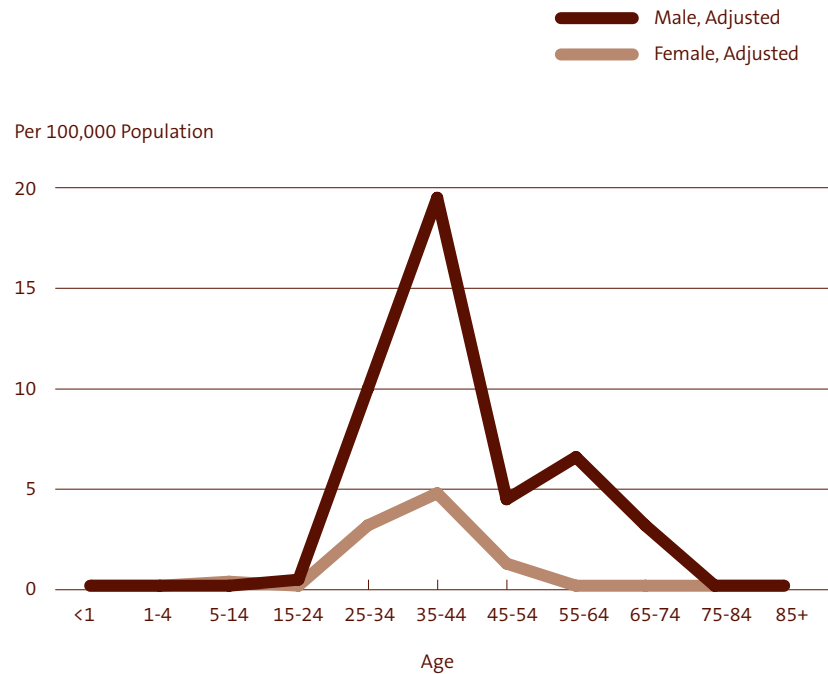


Table 4.56

### Human Immunodeficiency Virus (HIV) Disease Death Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1996-1998, and U.S. All-Races and White Populations, 1997  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	—*	—*	—*	—*	—*	—*
5-14 years	0.1	0.1	—*	—*	0.2	0.2
15-24 years	0.1	0.1	0.3	0.3	—*	—*
25-34 years	5.1	6.3	8.2	9.8	2.2	3.0
35-44 years	10.1	11.7	15.9	19.3	4.6	4.6
45-54 years	2.6	2.6	4.3	4.3	1.1	1.1
55-64 years	3.0	3.0	6.4	6.4	—*	—*
65-74 years	1.3	1.3	3.0	3.0	—*	—*
75-84 years	—*	—*	—*	—*	—*	—*
85 years +	—*	—*	—*	—*	—*	—*

U.S. All Races				U.S. White		
Age Group	Both Sexes	Male	Female	Both Sexes	Male	Female
Under 1 year	—*	—*	—*	—*	—*	—*
1-4 years	0.4	0.3	0.4	—*	—*	—*
5-14 years	0.3	0.3	0.2	0.1	0.2	—*
15-24 years	0.8	0.8	0.7	0.4	0.5	0.2
25-34 years	10.1	15.1	5.1	6.0	9.8	2.2
35-44 years	16.1	25.5	6.8	9.4	16.1	2.6
45-54 years	10.4	17.4	3.8	5.7	10.2	1.3
55-64 years	4.9	8.5	1.6	2.6	4.7	0.7
65-74 years	1.8	3.4	0.5	0.9	1.8	—*
75-84 years	0.6	1.0	0.4	0.3	—*	—*
85 years +	—*	—*	—*	—*	—*	—*

—\* Represents zero.

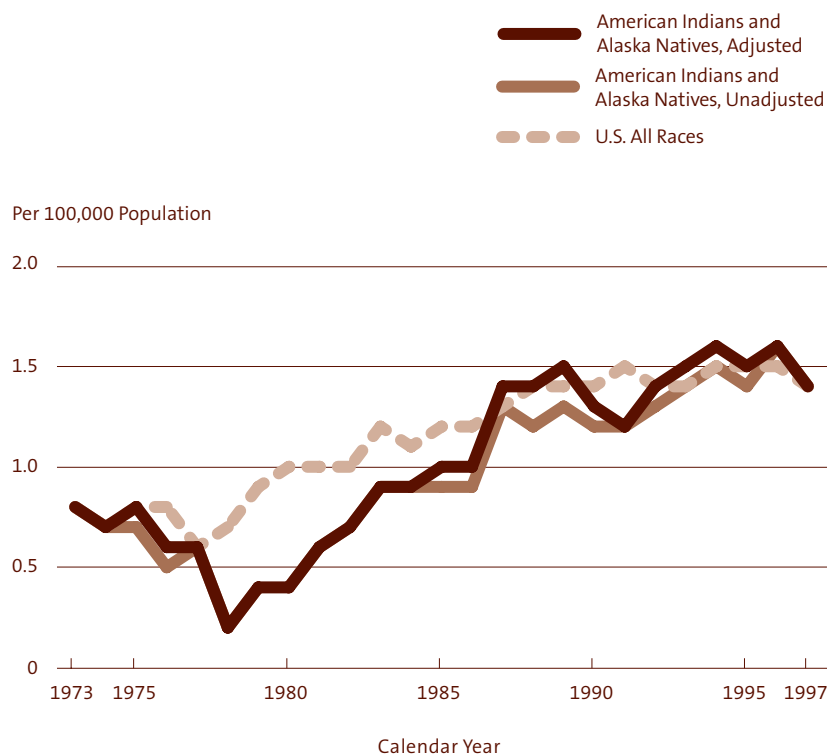
<sup>1</sup> Adjusted to compensate for misreporting of AI/AN race on state death certificates.



Chart 4.57

## Age-Adjusted Asthma Death Rates

AI/AN age-adjusted asthma rate has experienced a 7-fold increase from 1977-1979 (0.2) to 1996-1998 (1.4). The U.S. all-races asthma rate experienced a much slower increase over the same time period, increasing 2-fold from 1978 (0.7) to 1997 (1.4). The 1996-1998 AI/AN asthma rate is equal to the U.S. all-races rate (1.4) and is 40 percent higher than U.S. white rate (1.1). The AI/AN rates have been adjusted for misreporting of race on the state death certificates.



**Table 4.57****Asthma Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1973-1997

*(Age-Adjusted Rate per 100,000 Population)*

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White		Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Number Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	Rate	U.S. All Races	U.S. White
(1998)	13	13						
1996-1998 (1997)	22	23	1.4	1.4	1.4	1.1	1.0	1.3
1995-1997 (1996)	17	19	1.6	1.6	1.5	1.2	1.1	1.3
1994-1996 (1995)	18	18	1.4	1.5	1.5	1.3	1.0	1.2
1993-1995 (1994)	14	14	1.5	1.6	1.5	1.2	1.1	1.3
1992-1994 (1993)	18	21	1.4	1.5	1.4	1.2	1.1	1.3
1991-1993 (1992)	12	12	1.3	1.4	1.4	1.1	1.0	1.3
1990-1992 (1991)	12	12	1.2	1.2	1.5	1.2	0.8	1.0
1989-1991 (1990)	14	14	1.2	1.3	1.4	1.2	0.9	1.1
1988-1990 (1989)	10	14	1.3	1.5	1.4	1.2	1.1	1.3
1987-1989 (1988)	16	18	1.2	1.4	1.4	1.1	1.0	1.3
1986-1988 (1987)	8	9	1.3	1.4	1.3	1.1	1.1	1.3
1985-1987 (1986)	10	12	0.9	1.0	1.2	1.0	0.8	1.0
1984-1986 (1985)	5	5	0.9	1.0	1.2	1.0	0.8	1.0
1983-1985 (1984)	9	10	0.9	0.9	1.1	1.0	0.8	0.9
1982-1984 (1983)	7	7	0.9	0.9	1.2	0.9	0.8	1.0
1981-1983 (1982)	5	5	0.7	0.7	1.0	0.9	0.7	0.8
1980-1982 (1981)	4	4	0.6	0.6	1.0	0.9	0.6	0.7
1979-1981 (1980)	6	6	0.4	0.4	1.0	0.8	0.4	0.5
1978-1980 (1979)	0	0	0.4	0.4	0.9	0.8	0.4	0.5
1977-1979 (1978)	3	3	0.2	0.2	0.7	0.6	0.3	0.3
1976-1978 (1977)	1	1	0.6	0.6	0.6	0.5	1.0	1.2
1975-1977 (1976)	5	6	0.5	0.6	0.8	0.6	0.8	1.0
1974-1976 (1975)	2	3	0.7	0.8	0.8	0.6	1.0	1.3
1973-1975 (1974)	3	3	0.7	0.7	0.7	0.6	1.0	1.2
1972-1974 (1973)	4	4	0.8	0.8	0.8	0.6	1.0	1.3
(1972)	4	4						

<sup>1</sup> Adjusted - specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Data from 1972 and forward are drawn from specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and age-adjusted to the 1940 population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.58

## Age-Adjusted Mortality for All Causes Death Rates

AI/AN age-adjusted mortality rates for all causes of death decreased 33 percent from 1972-1974 (1,005.4) to 1985-1987 (669.1). Since then, there has been a slow but steady 7-percent increase of AI/AN mortality rates for all causes of death between 1985-1987 and 1996-1998 (715.2). The AI/AN mortality rate for the latest three-year period 1996-1998 is 1.5 times the U.S. all races rate of 479.1 for 1997. The AI/AN rates have been adjusted for misreporting of race on the state death certificates.

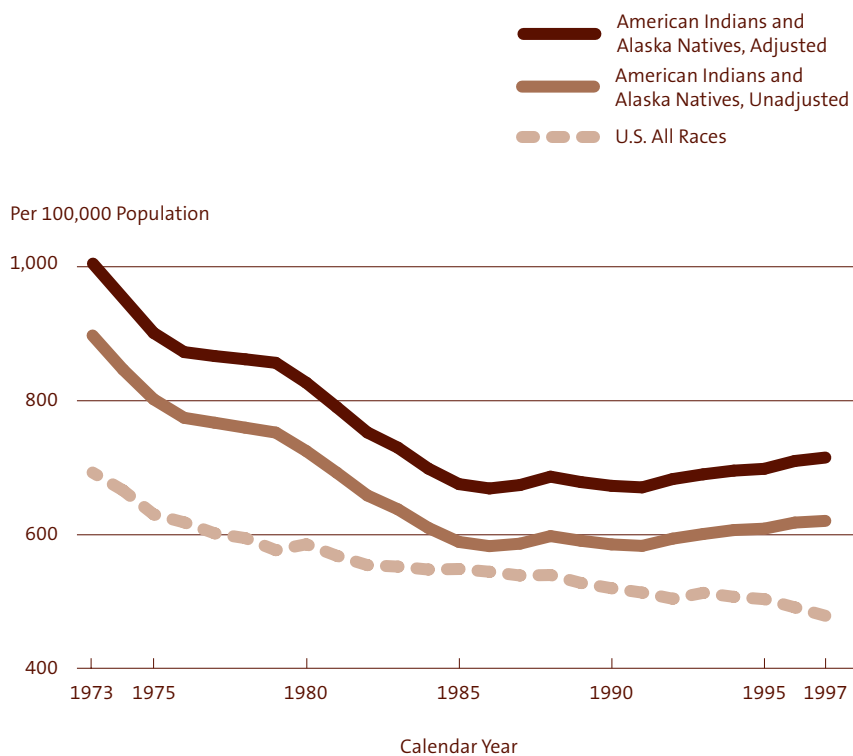


Table 4.58

## Mortality for All Causes Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All-Races and White Populations, 1973-1997

(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native		U.S. All Races		U.S. White	Ratio of American Indian and Alaska Native <sup>1</sup> to:	
	Number Unadjusted	Rate Adjusted <sup>1</sup>	Rate Unadjusted	Rate Adjusted <sup>1</sup>	Rate	U.S. All Races	U.S. White
(1998)	8,055	9,245					
1996-1998 (1997)	7,891	9,057	620.7	715.2	479.1	456.5	1.5 1.6
1995-1997 (1996)	7,562	8,662	618.2	710.1	491.6	466.8	1.4 1.5
1994-1996 (1995)	7,430	8,462	609.1	698.4	503.9	476.9	1.4 1.5
1993-1995 (1994)	7,151	8,180	607.0	695.7	507.4	479.8	1.4 1.4
1992-1994 (1993)	7,011	8,017	601.1	690.2	513.3	485.1	1.3 1.4
1991-1993 (1992)	6,731	7,720	594.2	683.1	504.5	477.5	1.4 1.4
1990-1992 (1991)	6,487	7,434	583.4	670.7	513.7	486.8	1.3 1.4
1989-1991 (1990)	6,211	7,109	585.6	673.0	520.2	492.8	1.3 1.4
1988-1990 (1989)	6,386	7,297	591.0	678.6	528.0	499.6	1.3 1.4
1987-1989 (1988)	6,072	6,938	598.0	686.7	539.9	512.8	1.3 1.3
1986-1988 (1987)	5,878	6,720	586.7	674.2	539.2	513.7	1.3 1.3
1985-1987 (1986)	5,563	6,366	583.0	669.1	544.8	520.1	1.2 1.3
1984-1986 (1985)	5,448	6,218	589.3	675.6	548.9	524.9	1.2 1.3
1983-1985 (1984)	5,346	6,101	610.2	698.7	548.1	525.2	1.3 1.3
1982-1984 (1983)	5,247	5,994	638.0	730.0	552.5	529.4	1.3 1.4
1981-1983 (1982)	5,291	6,014	658.7	752.7	554.7	532.3	1.4 1.4
1980-1982 (1981)	5,181	5,889	692.6	790.3	568.6	544.8	1.4 1.5
1979-1981 (1980)	5,407	6,151	724.9	826.9	585.8	559.4	1.4 1.5
1978-1980 (1979)	5,399	6,127	752.5	856.6	577.0	551.9	1.5 1.6
1977-1979 (1978)	5,071	5,723	759.8	861.9	595.0	569.5	1.4 1.5
1976-1978 (1977)	4,822	5,426	767.2	866.7	602.1	575.7	1.4 1.5
1975-1977 (1976)	4,757	5,337	774.5	872.6	618.5	591.3	1.4 1.5
1974-1976 (1975)	4,511	5,042	802.2	901.2	630.4	602.2	1.4 1.5
1973-1975 (1974)	4,492	5,014	846.5	948.9	666.2	635.4	1.4 1.5
1972-1974 (1973)	4,623	5,148	897.4	1,005.4	692.9	659.3	1.4 1.5
(1972)	4,369	4,884					

<sup>1</sup> Adjusted - specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

NOTE: Data from 1972 and forward are drawn from specific counties in the IHS service area. The AI/AN death rate columns present data for the three-year period specified and age-adjusted to the 1940 population; the U.S. all-races and U.S. white columns present data for a one-year period. The number columns indicate total AI/AN deaths for the one-year period specified.

Chart 4.59

## Life Expectancy at Birth

Life expectancy at birth for American Indians and Alaska Natives (AI/AN) for the three-year period of 1972-1974 was 63.6 years. By 1996-1998 life expectancy increased to 70.6 years; 5.9 years less than the U.S. all-races life expectancy of 76.5 years for 1997. The AI/AN life expectancy of 70.6 years is 6.6 years less than for the U.S. whites life expectancy of 77.2 years for 1997. The AI/AN rates have been adjusted for misreporting of race on the state death certificates.

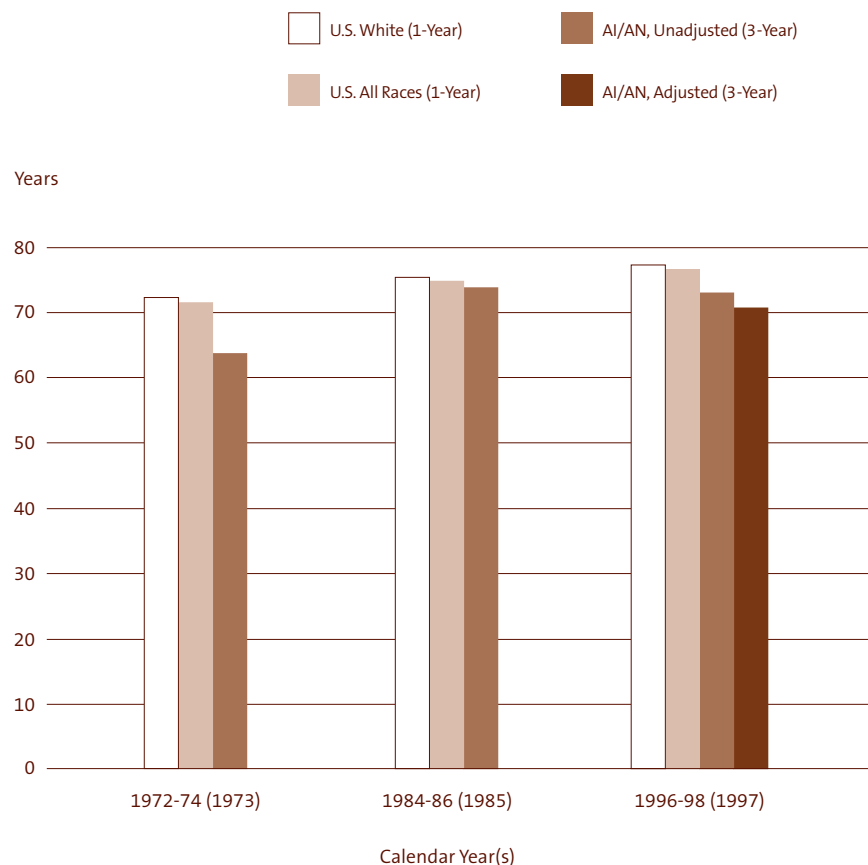


Chart 4.60

## Years of Potential Life Lost (YPLL)

The years of potential life lost (YPLL) rate for American Indians and Alaska Natives (AI/AN) for the three-year period 1996-1998 is 88.6; less than half of the YPLL rate (191.3) was for 1972-1974. The 1996-1998 AI/AN YPLL rate is 83 percent greater than the U.S. all-races YPLL rate of 48.4 for 1997 and 110 percent greater than the 1997 YPLL rate of 42.2 for U.S. whites. The AI/AN rates have been adjusted for misreporting of race on the state death certificates.

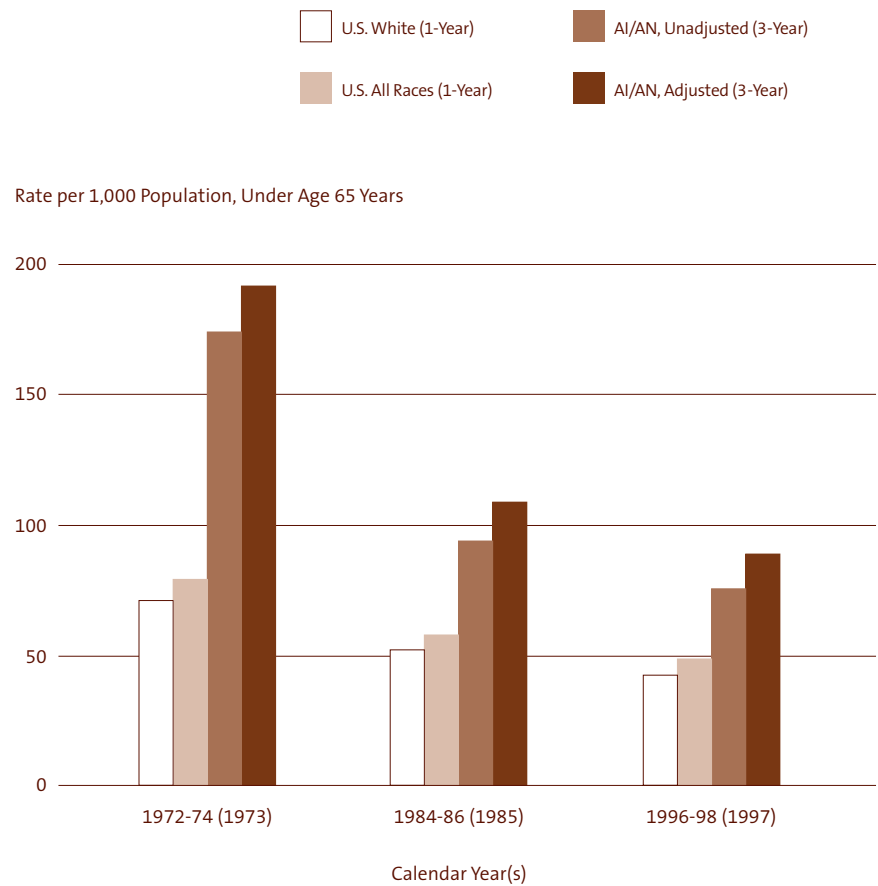


Chart 4.61

## Age-Adjusted Death Rate

The AI/AN age-adjusted death rate for all causes of death decreased 29 percent from the rate of 1,005.4 for the three-year period 1972-1974 to the rate of 715.2 for years 1996-1998. Both U.S. all-races and white rates decreased 31 percent from 1973 to 1997. The AI/AN 1996-1998 rate (715.2) is 49 percent higher than the 1997 U.S. all-races rate (479.1) and 57 percent higher than U.S. white rate (456.5). The AI/AN rates have been adjusted for misreporting of race on the state death certificates.

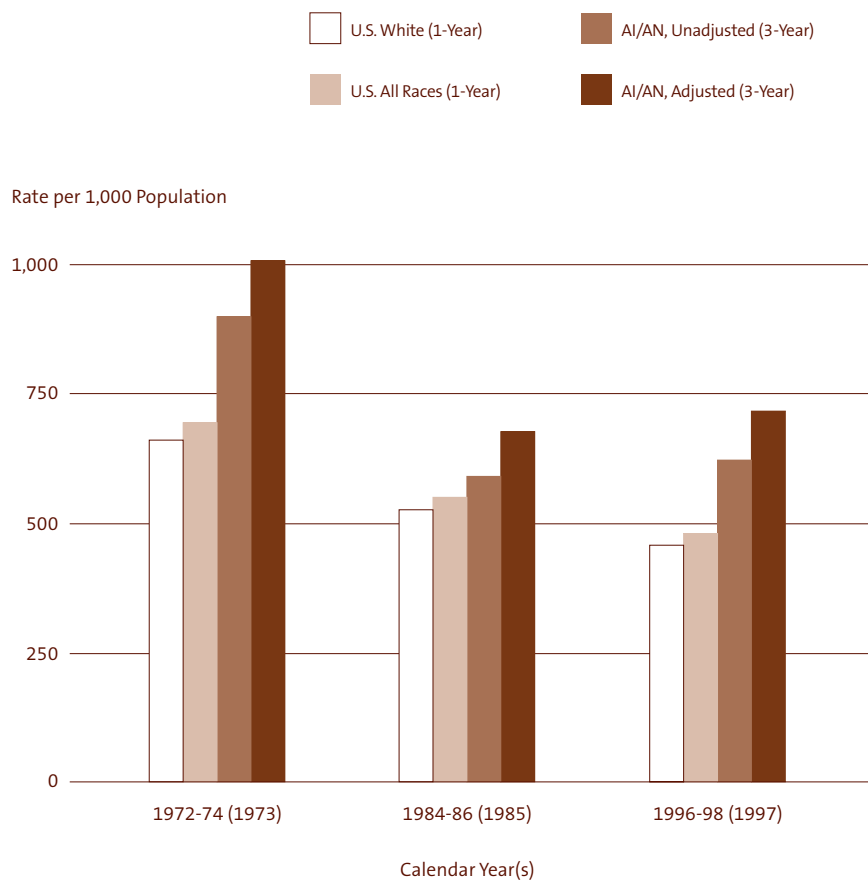


Table 4.59

## Overall Measures of Indian Health

IHS Service Area Population Compared with the U.S. All-Races and U.S. White Populations

	Life Expectancy At Birth (Years)		Years of Potential Life Lost (Rate per 1,000 Population <sup>4</sup> )		Age-Adjusted Death Rate (per 100,000 Population)	
	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>	Unadjusted	Adjusted <sup>1</sup>
<b>IHS Service Area</b>						
1996-1998	72.9	70.6	75.3 <sup>2</sup>	88.6 <sup>2</sup>	620.7	715.2
1984-1986	73.7	—	93.6 <sup>3</sup>	108.5 <sup>3</sup>	589.3	675.6
1972-1974	63.6	—	173.7 <sup>3</sup>	191.3 <sup>3</sup>	897.4	1,005.4
<b>U.S. All Races</b>						
1997	76.5		48.4		479.1	
1985	74.7		57.6		548.9	
1973	71.4		78.9		692.9	
<b>U.S. White</b>						
1997	77.2		42.2		456.5	
1985	75.3		51.9		524.9	
1973	72.2		70.8		659.3	
<b>RATIO: IHS to U.S. All Races</b>						
1996-1998 (1997)	0.95	0.92	1.56	1.83	1.30	1.49
1984-1986 (1985)	0.99	—	1.63	1.88	1.07	1.23
1972-1974 (1973)	0.89	—	2.20	2.42	1.30	1.45
<b>RATIO: IHS to U.S. White</b>						
1996-1998 (1997)	0.94	0.91	1.78	2.10	1.36	1.57
1984-1986 (1985)	0.98	—	1.80	2.09	1.12	1.29
1972-1974 (1973)	0.88	—	2.45	2.70	1.36	1.52

— Data not available. Adjusted data for Life Expectancy for the IHS Service Area population is unavailable for 1972-1974 and 1984-1986.

<sup>1</sup> Adjusted — specifies rate or ratio of rates adjusted to compensate for misreporting of AI/AN race on state death certificates.

<sup>2</sup> Years of Potential Life Lost (YPLL) is a mortality indicator which measures the burden of premature deaths. YPLL is presented for persons under 65 years of age because the average **life expectancy** for AI/AN is over 65 years. The number of deaths for each age group is multiplied by the years of life lost, calculated as the difference between age 65 years and the midpoint of the age group. This calculation was performed through the use of age groups under one, one to four, and **five-year** age groups through 55 to 64 years. Years of potential life lost is derived by summing years of life lost over all age groups.

<sup>3</sup> Years of Potential Life Lost (YPLL) is a mortality indicator which measures the burden of premature deaths. YPLL is presented for persons under 65 years of age because the average **life expectancy** for AI/AN is over 65 years. The number of deaths for each age group is multiplied by the years of life lost, calculated as the difference between age 65 years and the midpoint of the age group. This calculation was performed through the use of age groups under one, one to four, and **10-year** age groups through 55 to 64 years. Years of potential life lost is derived by summing years of life lost over all age groups.

<sup>4</sup> Rate per 1,000 population under 65 years of age.



Chart 4.62

## IHS Program Accomplishments Since 1973 (Adjusted Mortality Data)

The health status of AI/AN has experienced major improvements since 1972-1974. Some of these positive changes are evident from lower death rates. For example, maternal and infant mortality rates have declined 75 percent and 64 percent, respectively. Likewise, age-adjusted death rates have been reduced for tuberculosis (86 percent), unintentional injuries (54 percent), pneumonia and influenza (51 percent), and injuries and poisonings (50 percent).

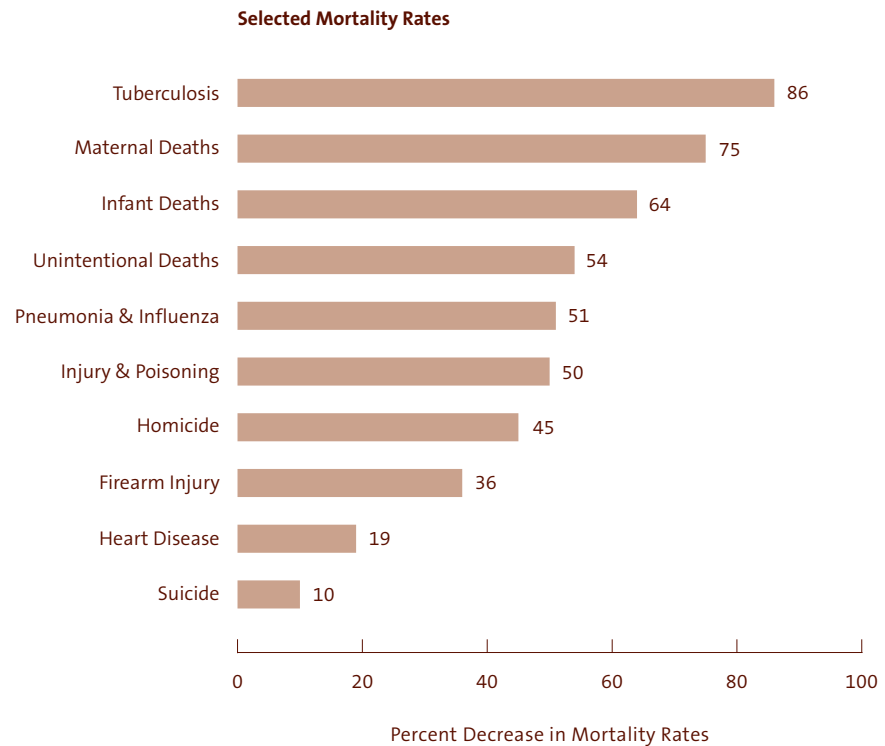


Table 4.62

**IHS Program Accomplishments**  
 IHS Service Area

Health Improvements	Rate	Rate			Percent Decrease to 1996-1998	
	Unadjusted (1972-1974)	Adjusted <sup>1</sup> (1972-1974)	1996-1998 Rate		Unadjusted (from 1972-1974)	Adjusted <sup>1</sup> (from 1972-1974)
			Unadjusted	Adjusted <sup>1</sup>		
<b>Death Rates</b>						
Infant <sup>2</sup>	22.2	25.0	7.6	8.9	66	64
Maternal <sup>3</sup>	27.7	27.7	6.8	6.8	75	75
Pneumonia and influenza <sup>4</sup>	40.8	43.8	19.8	21.5	51	51
Tuberculosis, all forms <sup>4</sup>	10.5	10.7	1.5	1.5	86	86
Unintentional injury <sup>4</sup>	188.0	206.7	82.2	94.7	56	54
Suicide <sup>4</sup>	21.0	22.4	17.6	20.2	16	10
Homicide <sup>4</sup>	24.3	26.3	12.7	14.5	48	45
Heart disease <sup>4</sup>	162.8	193.4	132.9	157.1	18	19
Injury and poisoning <sup>4</sup>	241.7	264.2	114.7	132.0	53	50
Firearm injury <sup>5</sup>	25.2	27.5	15.0	17.6	40	36

<sup>1</sup> Adjusted — specifies a rate or percent adjusted to compensate for misreporting of AI/AN race on state death certificates.

<sup>2</sup> Rate per 1,000 live births.

<sup>3</sup> Rate per 100,000 live births.

<sup>4</sup> Age-adjusted to the 1940 standard population; age-adjusted rate per 100,000 population.

<sup>5</sup> 1978-1980 firearm injury mortality rate; age-adjusted to the 1940 standard population; age-adjusted rate per 100,000 population.